

TECHNOLOGY DEPT.

Modern

.....

LITHOGRAPHY

NALC PRESIDENT
Herman Goebel



LNA PRESIDENT
L. E. Oswald

PRIMER PRIMER

PRIMER PRIMER PRIMER PRIMER

Primer

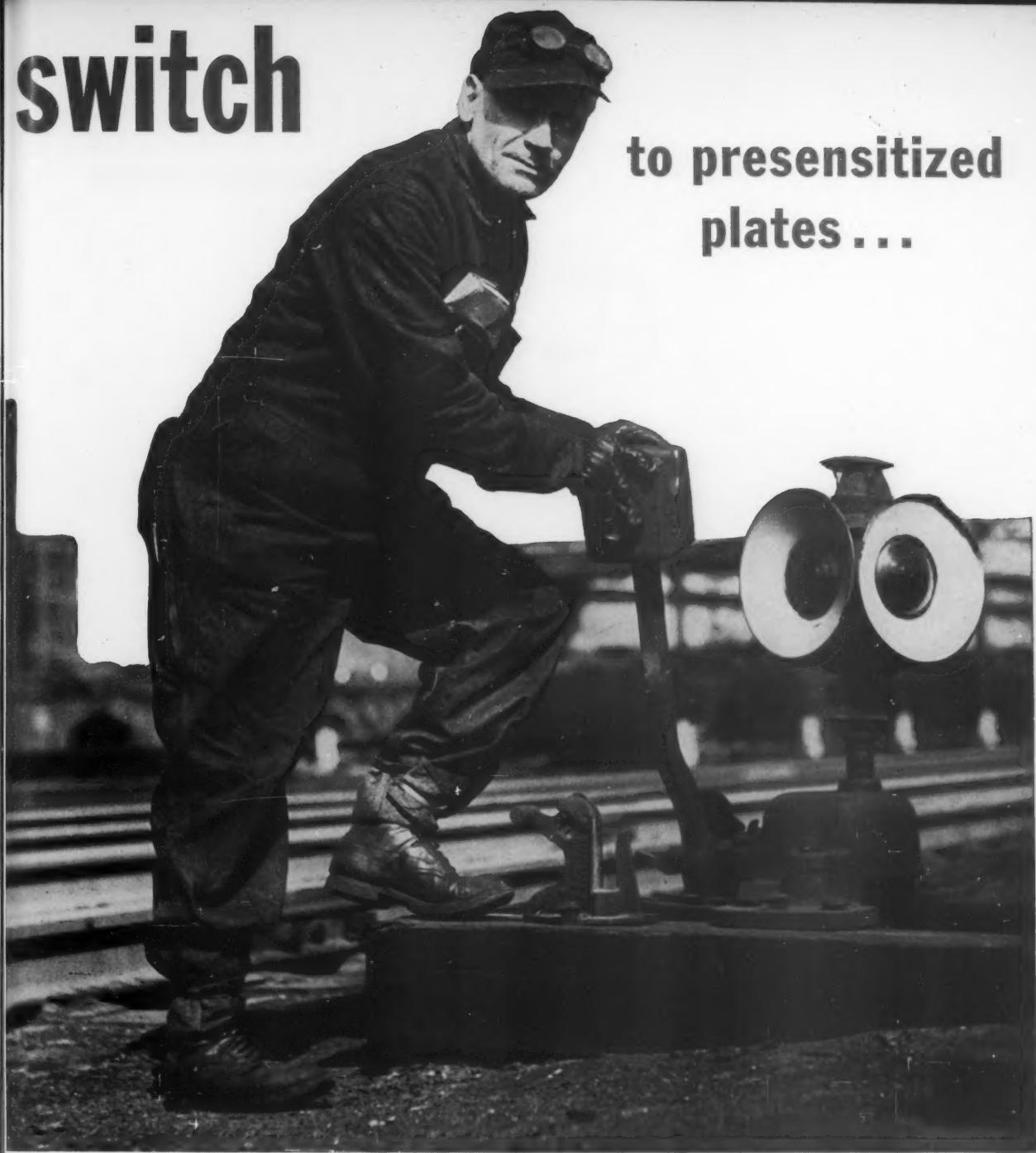


On the upswing, because it's free of frills and fuss. Clarity makes it perfect for everything from first reader to financial report, and the *compact* design provides economy. For attractive brochure, address Mergenthaler Linotype Company, 29 Ryerson Street, Brooklyn 5, N. Y. Or your Linotype Agency, or your Production Engineer.

• LINOTYPE •

switch

to presensitized
plates ...



and the right track to reduced costs !

Presensitized plates speed production . . . save time and labor . . . improve quality. What's more, these *modern* plates are easier to handle, easier on your equipment, ideal for even long runs.

There's a complete stock of Enco, Harris, and 3M plates at the Roberts & Porter branch near you. So, switch to presensitized *today*. It's the sure way to better control over cost *and* quality.

ROBERTS & PORTER
INCORPORATED

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For trouble-free press performance specify **Consolidated Double Coated Offset Papers**

Greater stability is just one of the big pluses you get from Consolidated's double coating of offset printing papers. You can count on superior pick resistance and maximum uniformity, too. All add up to improved press performance—better results.

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You'll find double coating makes Consolidated Offset Printing Papers even greater values than before.

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Consolidated

ENAMEL PRINTING PAPERS
a complete line for offset and letterpress printing
CONSOLIDATED WATER POWER AND PAPER COMPANY
SALES OFFICES: 135 S. LA SALLE ST. • CHICAGO 3, ILL.

NALC's
Herman
Goebel

LNA's
Les
Oswald

Cover

Elected to head two of the country's leading trade associations at recent conventions were our cover subjects this month. Herman Goebel (upper) is pictured at the convention in Washington, where he was elected president of the National Association of Litho Clubs. Les Oswald was named in Phoenix to head the Lithographers National Association for the coming year.

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MODERN LITHOGRAPHY

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JUNE, 1958

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what's this
SHOPPING CART
got to do with
LITHOGRAPHY ?



8
PLENTY! . . . when Mrs. American goes shopping she's attracted by colorful, hard sell packages.

As a lithographer you have much to say about how colorful these packages can be. You have the power to sell more for your customers . . . by giving them better lithography.

One way to get better lithography is to use Lith-Kem-Ko chemicals. For over 30 years, Lith-Kem-Ko has been supplying better chemicals for better lithography.

Lith-Kem-Ko makes a complete line of surface and deep etch plate chemicals, pressroom chemicals and distributes a wide variety of lithographic needs.

**LITHO CHEMICAL
& SUPPLY CO., INC.**



46 HARRIET PLACE, LYNBROOK, L. I., NEW YORK

A new and outstanding contribution to the graphic arts

hi-fⁱ

OFFSET BLANKETS

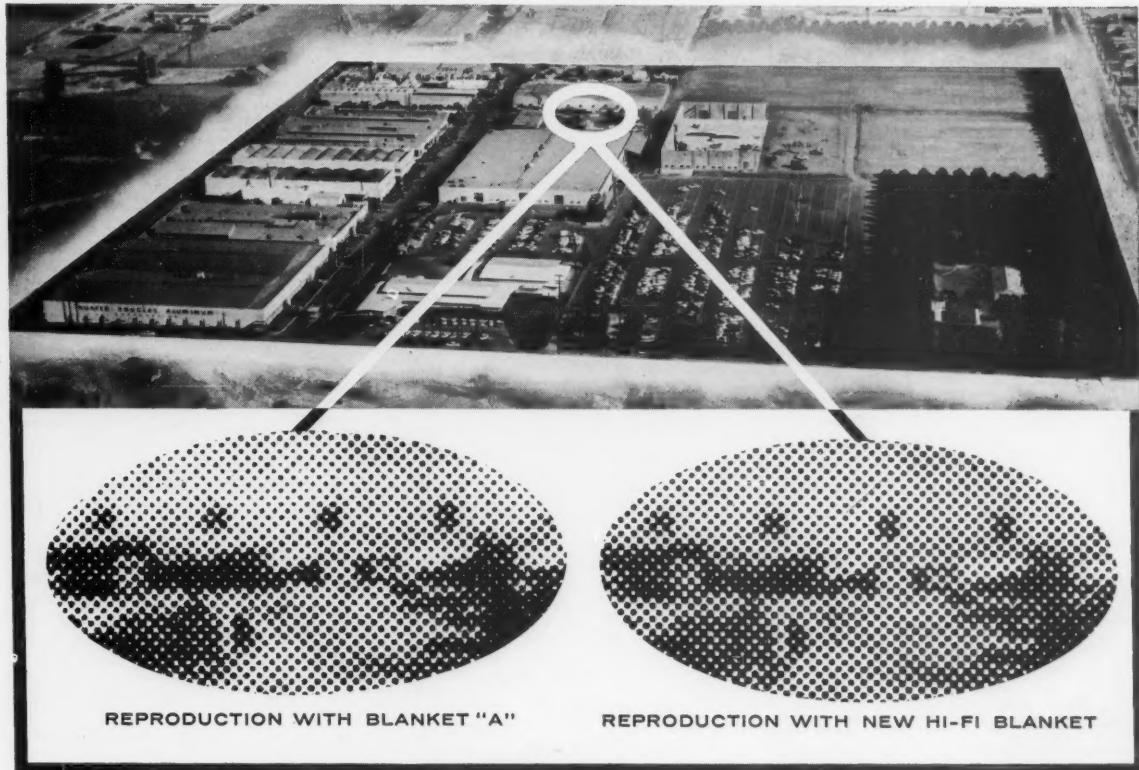


Illustration courtesy Hunter Douglas Aluminum Corporation, Riverside, California, and Offsetone Press, Inc., New York, N. Y.

Hi-Fi blankets are new. Hi-Fi blankets are different. Why? Because they give you a completely unique surface—achieved through an exclusive process called "micro-texturizing."

The above comparison shows you the result. It was made by splitting an actual run. The only change was in the blanket: a similarly priced competitor versus Hi-Fi. Then the encircled portion of the half-tone was micro-photographed (8x magnification). We think the superior fidelity of Hi-Fi is clearly illustrated.

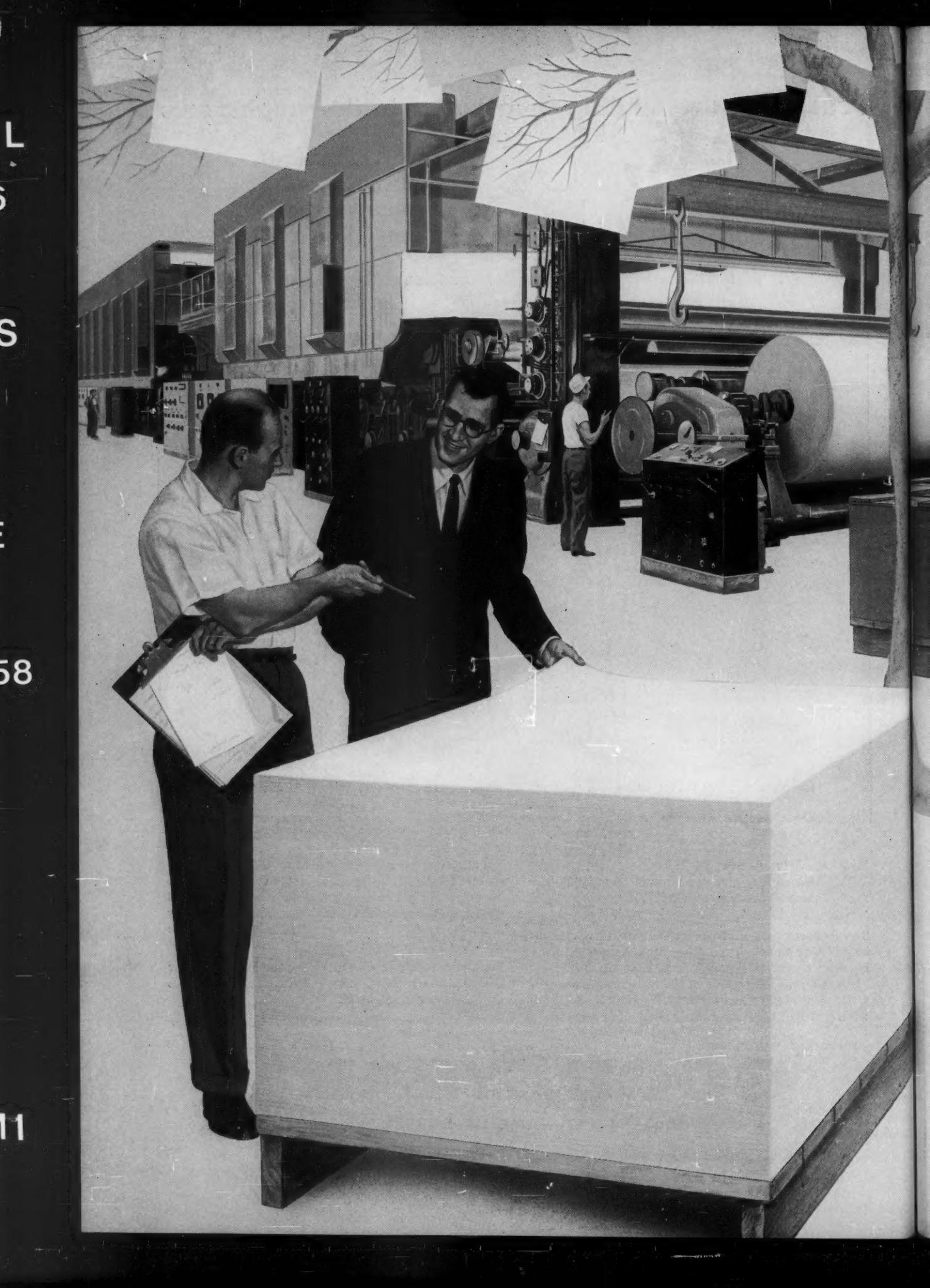
But why not try a Hi-Fi blanket on one of your own presses? Besides further proving its fidelity, you'll also learn how much it reduces "break-in" time—how little it stretches—how much it resists "smashing"—how easily it washes up (without pumice)—and how well it works with any kind of paper.

For the complete Hi-Fi story see your local Goodyear Distributor. Or write Goodyear, Printers Supplies Sales Dept., New Bedford, Mass.

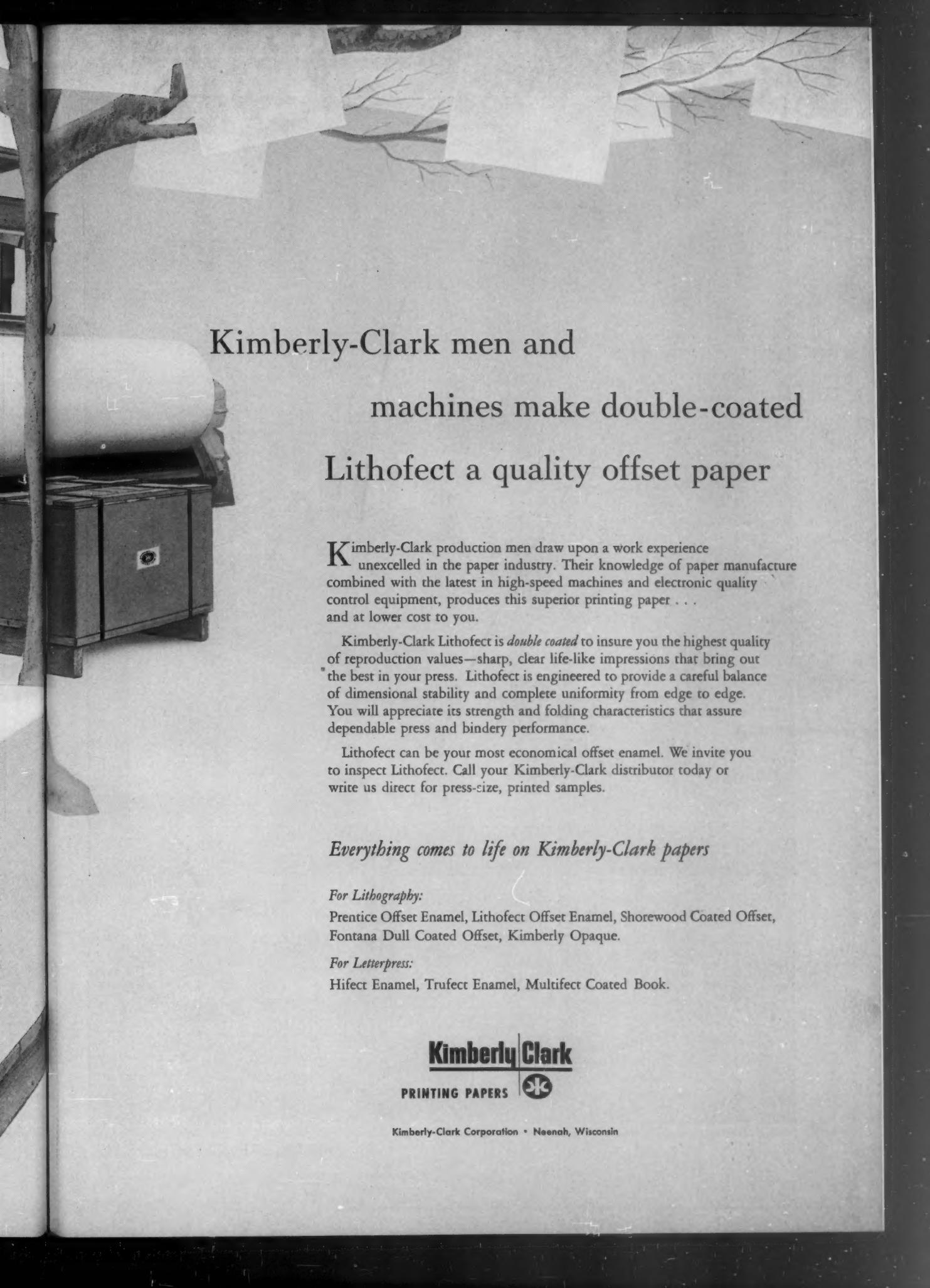
Hi-Fi—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

PRINTERS SUPPLIES by

GOOD  **YEAR** 
THE GREATEST NAME IN RUBBER



58



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Kimberly-Clark production men draw upon a work experience unexcelled in the paper industry. Their knowledge of paper manufacture combined with the latest in high-speed machines and electronic quality control equipment, produces this superior printing paper . . . and at lower cost to you.

Kimberly-Clark Lithofect is *double coated* to insure you the highest quality of reproduction values—sharp, clear life-like impressions that bring out the best in your press. Lithofect is engineered to provide a careful balance of dimensional stability and complete uniformity from edge to edge. You will appreciate its strength and folding characteristics that assure dependable press and bindery performance.

Lithofect can be your most economical offset enamel. We invite you to inspect Lithofect. Call your Kimberly-Clark distributor today or write us direct for press-size, printed samples.

Everything comes to life on Kimberly-Clark papers

For Lithography:

Prentice Offset Enamel, Lithofect Offset Enamel, Shorewood Coated Offset, Fontana Dull Coated Offset, Kimberly Opaque.

For Letterpress:

Hifect Enamel, Trufect Enamel, Multifect Coated Book.

Kimberly Clark

PRINTING PAPERS



Kimberly-Clark Corporation • Neenah, Wisconsin

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results of
ceaseless
research



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Inks

Founded 1920

58
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Quick Drying—Sharper Screens

Howard Flint Ink Co.

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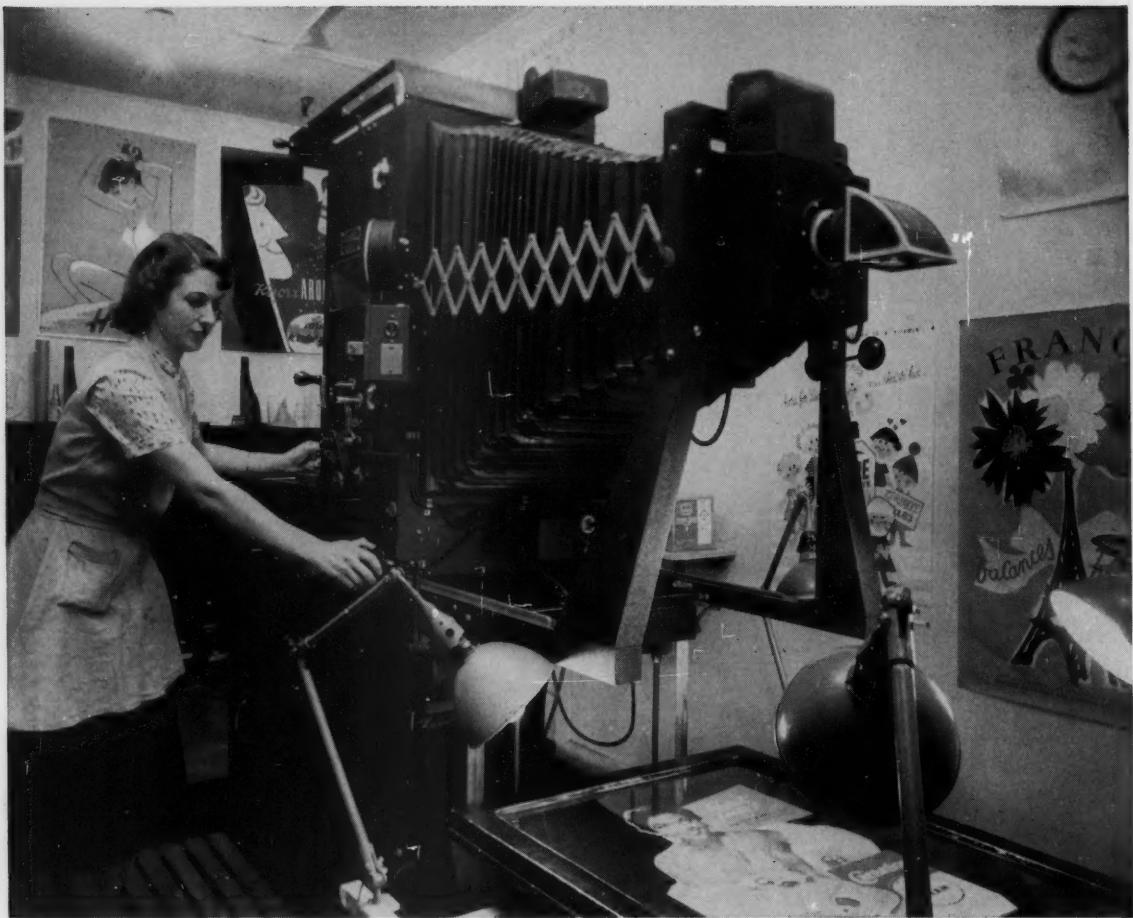


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A Rectigraph photo-copying machine copies anything written, printed, typed, drawn or photographed, in same, enlarged, or reduced size. Provides negative or positive prints up to 18" x 24". No darkroom is required.

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DEPT. 341 • ROCHESTER 3, NEW YORK
BRANCH OFFICES IN PRINCIPAL CITIES

**HALOID
XEROX®**



What ...a web press for job work?

That's right...a web press! It's a two color offset press...the ATF GREEN HORNET. It's designed specifically to bring the high production advantages of web printing to regular job work.

You'll find this press a real time saver and money-maker on folders, price lists, leaflets, letterheads, mailing pieces, and many other types of work.

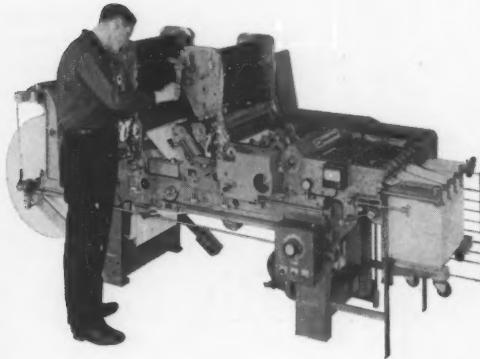
The Green Hornet handles a web from 8" up to 17½" wide...delivers cut sheets 11½" long. It prints two colors on one side of the web, or one color on each side...at speeds up to 25,000 IPH...and even higher! A built-in slitter permits running 8½" x 11" jobs two-up. Thus you can produce as many as 50,000 sheets per hour. And with the special *double ending device*, you can print an 8½" wide web *two colors on both sides*.

You can easily see how much more productive this is than a sheet operation...and what a favorable bidding advantage this high production gives you.

Learn how the ATF Green Hornet can fit into your operation—how it will enable you to handle a greater volume of business at greater profits. Mail coupon for your copy of the Green Hornet folder that covers all specifications and operating features.

Special features that will help you win jobs and profits:

Cuts stock costs, because paper is cheaper when bought in rolls.
Perforates lengthwise at any point across the web.
Unloads without stopping the press.
Uses same offset plates as sheet fed presses.
Minimum number of controls speeds set-up time.



American Type Founders

200 Elmora Avenue • Elizabeth, New Jersey

*Better, more profitable printing...
from the most complete line of equipment.*

American Type Founders
Dept. M.L., 200 Elmora Avenue, Elizabeth, New Jersey

Please send me a copy of the Green Hornet folder.

NAME TITLE

COMPANY

STREET AND NUMBER

CITY ZONE STATE

A BIG STEP

for the printing industry . . .

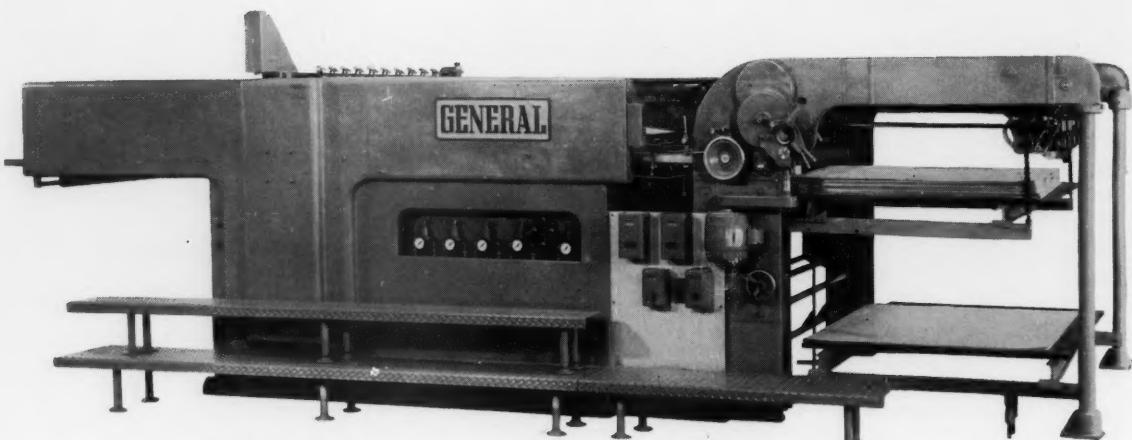
General's No. 76, the BIG silk screen press that handles sheets up to 52" x 76" at speeds to 1500 per hour, prints regular or metallic inks, fluorescents, glue, etc., on paper, metal, plastics or other materials. Brings the versatility of high speed silk screen production to jobs involving extremely large stock sizes, special folding carton applications or other specialized problems.

And A BIG STEP FORWARD for the printer

who increases his production capacity, efficiency and profit potential with the General 76 in his shop setup. Whether you

select the BIG 76 or one of six smaller General Sill Screen Cylinder Presses, such standard features as automatic feed, precision stencil and sheet register, vacuum cylinder sheet control and accurate inking control will help cut costs, and build profits year-after-year. Write for details!

A Big Step . . .



from the largest to the smallest in screen process presses . . .



General Research and Supply Company

572 S. DIVISION AVE. • GRAND RAPIDS 3, MICHIGAN



SPLIT-SEC

Trademark

GPI

's new offset ink
sets in a *wink!*



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SPLIT-SEC for LETTERPRESS

Same fast-setting and quality features



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Your work is as good as your bond

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... of course

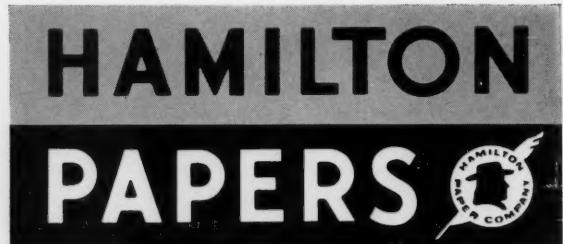
Now WHITER and BRIGHTER than ever

Brighter and whiter than ever — that's today's Hamilton Bond. It provides more contrast for illustrations, greater sharpness for type. That's why it is a better sheet . . . and why your customers will be delighted when you use Hamilton Bond for all their needs.

Everything else about Hamilton Bond is unchanged. It is the same blend of the world's finest pulps. It has the same genuine watermark, clear formation, absolutely level surface, uniformity, strength and endurance, unmatched printing qualities. It is pre-humidified and moisture-proof wrapped.

What's more, consistent national advertising is increasing the prestige and acceptance of — and the demand for — Hamilton Bond.

Standardize on Hamilton Bond—the *complete* line. It is good for you and your customers!



BUSINESS PAPERS... TEXT & COVER... OFFSET... BOOK
Hamilton Paper Company, Miquon, Pa. • Mills at Miquon, Pa., and Plainwell, Mich. • Offices in New York, Chicago, Los Angeles

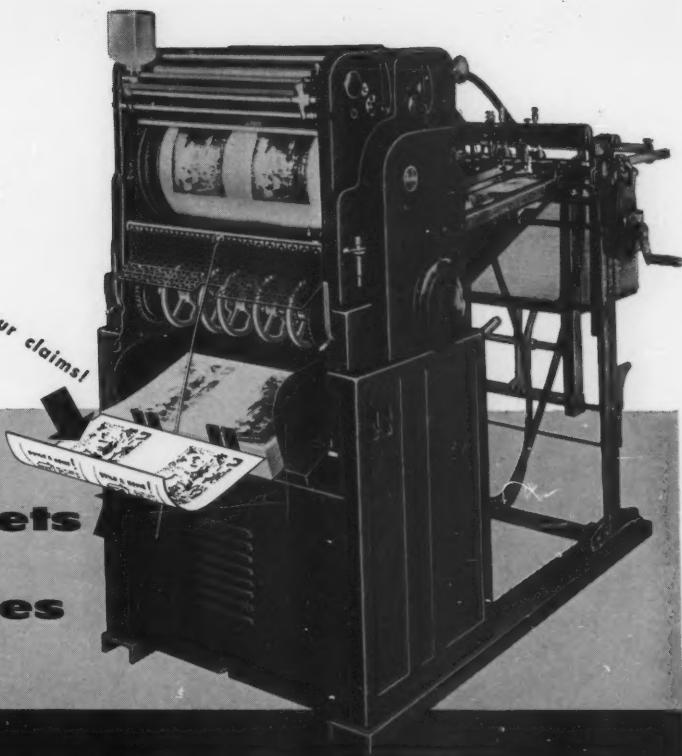
21 MILLION INDIVIDUAL COPIES of these magazines will carry Hamilton ads during 1958





Seeing's believin'... make us prove our claims!

**Run 2-up
on 14" x 17½" sheets
and
Print both sides
at once!**



DAVIDSON DUAL-LITH MODEL 233



The big sheet size of Davidson Dual-Lith Model 233—combined with Davidson's patented 2-Cylinder Principle—is putting many a printer way out in front of his competitors. This rugged *production* machine prints **BOTH** sides of ganged-up jobs *simultaneously*... delivers 10,800 impressions per hour at normal operating speeds! On 8½" x 11" jobs printed two-up and on both sides, the runs are off in one-quarter of normal running time. On smaller page sizes, you can gang up as many units as you want within the big 13" x 17" form area—even add a special segment for a full 14" x 17" printing area!

For conventional offset, Model 233 provides clear, sharp reproduction of line and halftone work... superior coverage of large-area solids... sparkling multi-color reproduction in hairline register. And Davidson's unique 2-Cylinder Principle with removable segments gives you a choice of 8 quality printing methods on **ONE** machine—lets you select the best process for the job at hand!



DAVIDSON CORPORATION
A Subsidiary of Mergenthaler Linotype Company
29 RYERSON STREET, BROOKLYN 5, NEW YORK
Distributors in all principal cities and Canada

See a demonstration...

Headings in ProType • Text in Linotype

MODERN LITHOGRAPHY, June, 1958

DAVIDSON CORPORATION
29 Ryerson Street, Brooklyn 5, New York

Arrange Model 233 demonstration
 Send literature

Name _____

Firm _____

Street _____

City _____ Zone _____ State _____

ML-6-8

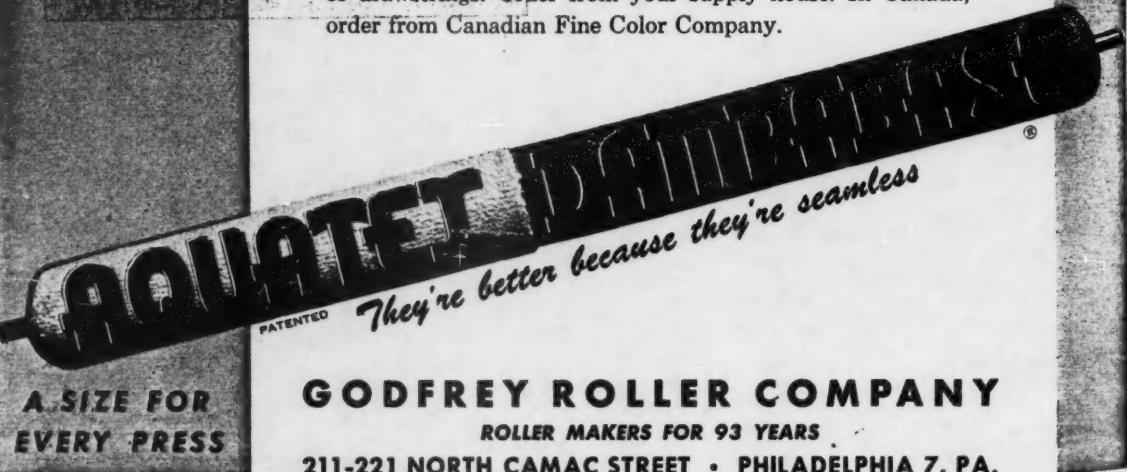
The MAGIC OF CHEMISTRY

... gives you consistent-quality dampening

Lithography itself is a chemically-controlled process. And full advantage of chemical magic has been taken in the treatment of Aquatex and Dampabase dampening-roller coverings.

That all-important factor to the lithographer — even dampening — guided our textile experts in developing a new perfect chemical treatment to assure you consistent, even dampening over a longer period with Aquatex outer covering and Dampabase undercushion.

Aquatex and Dampabase stay smooth, won't creep or wrinkle, won't "fuzz" and mar good impressions. It will pay you to insist on original Aquatex and Dampabase, either in the familiar dispenser roll or in pre-cut lengths with laces or drawstrings. Order from your supply house. In Canada, order from Canadian Fine Color Company.



A SIZE FOR
EVERY PRESS

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ROLLER MAKERS FOR 93 YEARS
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NOW

FASTER, MORE ACCURATE MECHANICALS and OPEN WINDOW NEGATIVES

SUPERIOR, QUICKER MASKING

IN 3 EASY STEPS

with

RUBYLITH-M3

Saves Time — Saves Money for
Artists, Engravers, Lithographers

RUBYLITH M3 is a red film laminated to a stable transparent plastic backing sheet. It is removable from the backing sheet. Selected portions of a design may be cut with a stencil knife.

1. Tape Rubylith M3 film-side up over your copy.
2. Cut and peel the film from those portions of the design thru which light is to take effect.
3. Your mechanical is ready for plate... or can be placed before the camera and will photograph black.

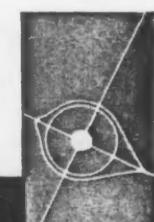
Rubylith M3 is extremely versatile — easily replaced on the backing sheet for corrections. Works perfectly with Benday sheets as an open window negative.

Mechanical negatives or masks cut with RUBYLITH M3 produce sharp, clear, distinct edges. No line is sharper than a line that is cut.

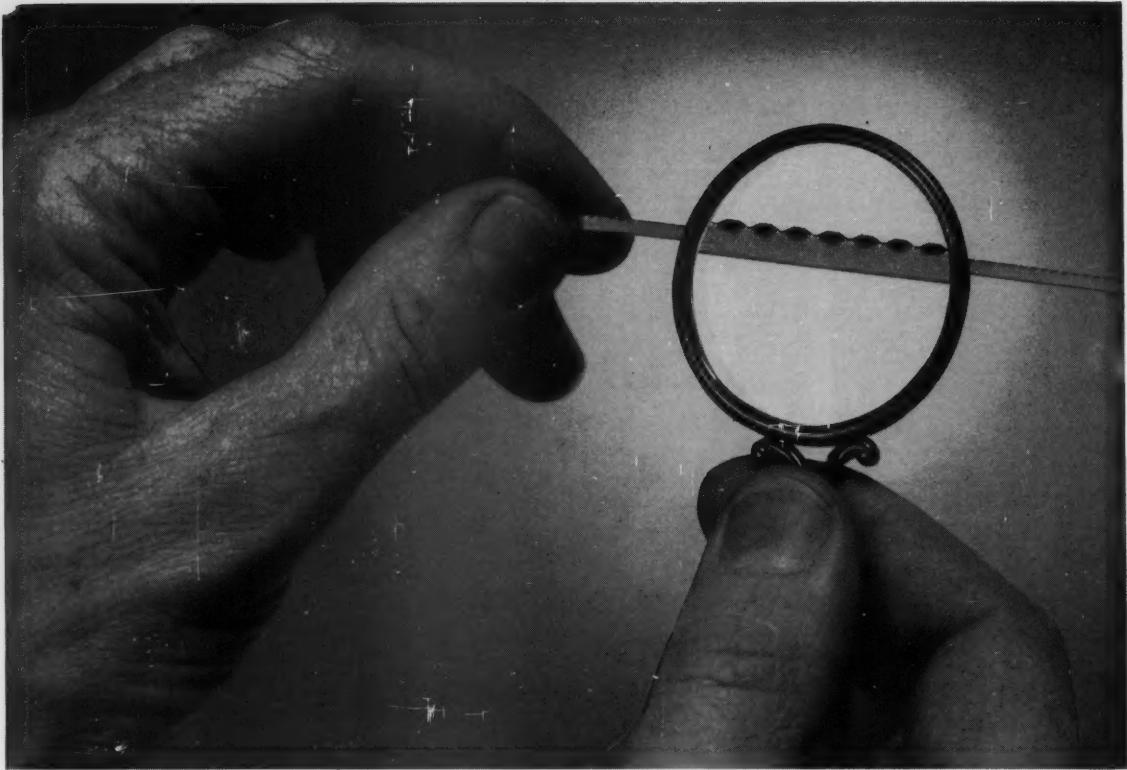
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ULANO

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GRAPHIC ARTS
SUPPLIES, INC.



Litho-perf

PAT. APPLIED FOR.

PUTS REAL TEETH IN YOUR BIDS
FOR JOBS WITH PERFORATING.

PERFORATE ON OFFSET PRESSES WITH YOUR REGULAR LITHO RUN. This tiny flexible steel band is so small that you can hardly believe that it will give you thousands of perforations . . . trouble free perforations on your regular litho run!

Litho-perf is applied with our special tape to the impression cylinder so that you can perforate simultaneously with the printing impression. It only takes minutes to apply and you save an extra run.

Perforate across the cylinder, around the cylinder, or at any angle; as many places as necessary. No costly attachments necessary.

Six foot strip in dispenser box, tape included, \$5.40. 20 foot strip, \$16.20.

LITHO-PERF "SNAP-OUT" RULE NOW AVAILABLE. Now your forms can be printed and snap-out perforated on the same run . . . works just like regular litho-perf rule. Six foot strip in dispenser box, tape included \$7.50. 20 foot strip, \$22.50.



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SUPPLY HOUSES

Manufactured by
H. S. BOYD COMPANY
Tulsa, Okla., U. S. A.

New

high speed REPROLITH ORTHO TYPE C

the finest graphic arts material available in America today!

.....

Here at last is a new accomplishment in a graphic arts material that combines superb response with high speed performance.

New ANSCO REPROLITH ORTHO TYPE C is a fully orthochromatic emulsion with excellent response to filtration saving much handwork on negatives. It reaches maximum density in only 2 minutes in Reprodol developer while maintaining crystal clear areas so desirable in both line and half tone work.

Up to a full stop faster with tungsten illumination, REPROLITH ORTHO TYPE C cuts exposures, and speeds up production while giving significant increases in image quality. Contact your local AnSCO representative for a demonstration of this fine new contribution to graphic arts technology. ANSCO a division of General Aniline & Film Corporation, Binghamton, New York.

TECHNICAL DATA

Suggested Exposure with tungsten illumination close aperture $\frac{1}{2}$ to one full stop.
With arc lights cut basic exposure $\frac{1}{2}$.
Safelight Red with ten to 25 watt bulb at 4'.

Film Base .0055" regular and .0035" thin base.

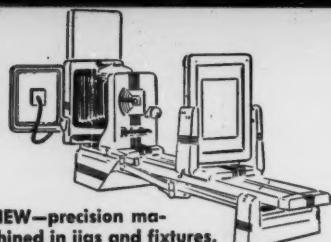
Processing 2 minutes in AnSCO Reprodol at 68 degrees F (20C).

Filter Factors

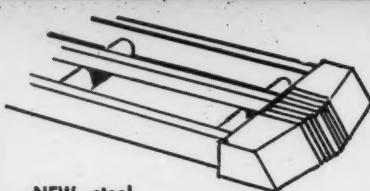
K1	K2	K3	G	B	C5	D
1 1/2	2	2 1/4	5	3	6	3

AnSCO

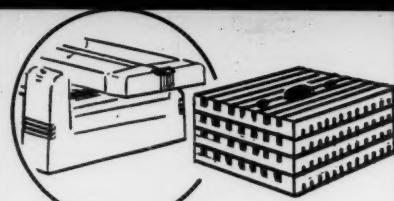
Reprolith Ortho Type C



NEW—precision machined in jigs and fixtures, no sheet metal or fabrications. One piece cast-metal members.



NEW—steel welded track, one piece with center guide and cross supports, precision machined and planed.

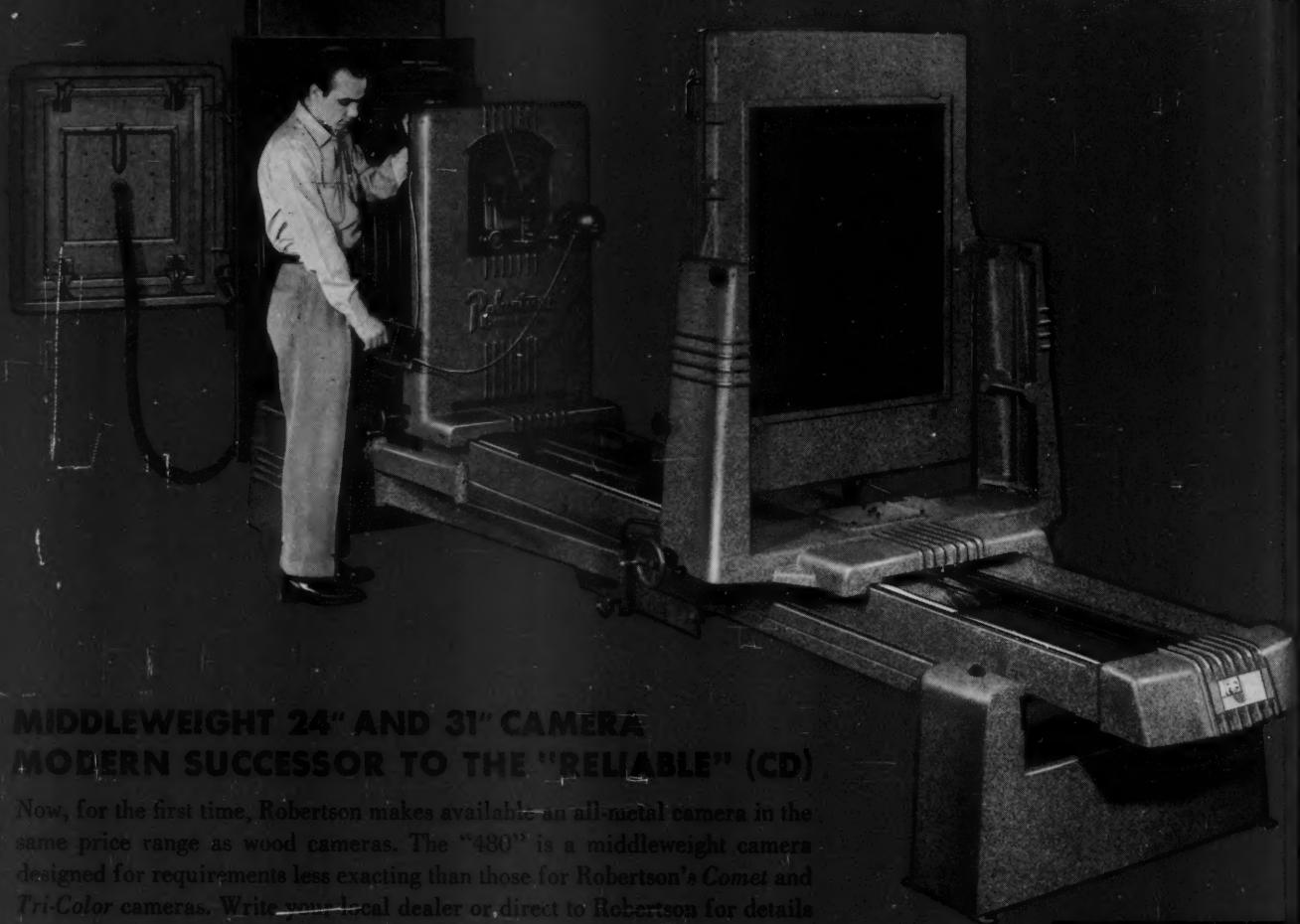


NEW—floating rubber suspension to effectively dampen vibration.

ALL NEW—ALL METAL

ROBERTSON

480

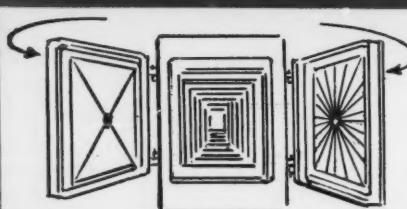


**MIDDLEWEIGHT 24" AND 31" CAMERA
MODERN SUCCESSOR TO THE "RELIABLE" (CD)**

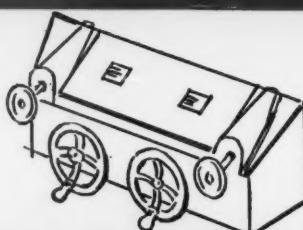
Now, for the first time, Robertson makes available an all-metal camera in the same price range as wood cameras. The "480" is a middleweight camera designed for requirements less exacting than those for Robertson's *Comet* and *Tri-Color* cameras. Write your local dealer or direct to Robertson for details and prices.

ROBERTSON PHOTO-MECHANIX, INC. • 7440 LAWRENCE AVE., CHICAGO 31, ILLINOIS

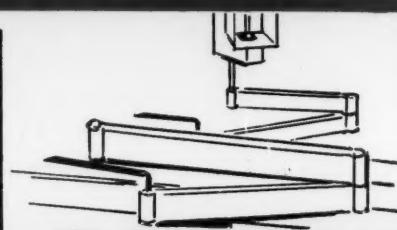
Robertson
PHOTO-MECHANIX



NEW—swinging doors for ground glass and film holder.



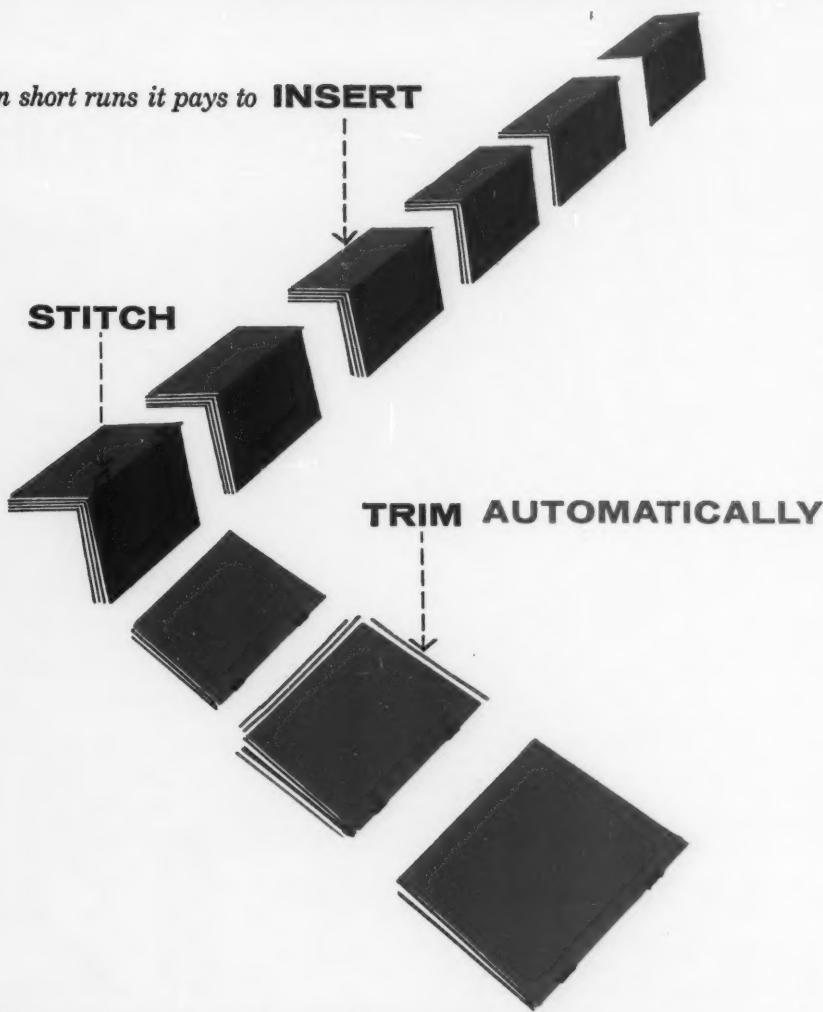
NEW—horizontal and vertical lens board control from darkroom.



NEW—off-the-floor lamp carriers coordinate lamp and copyboard movement.

(ANOTHER MODERN DEXTER COMBINATION FOR BETTER BINDING)

even on short runs it pays to **INSERT**



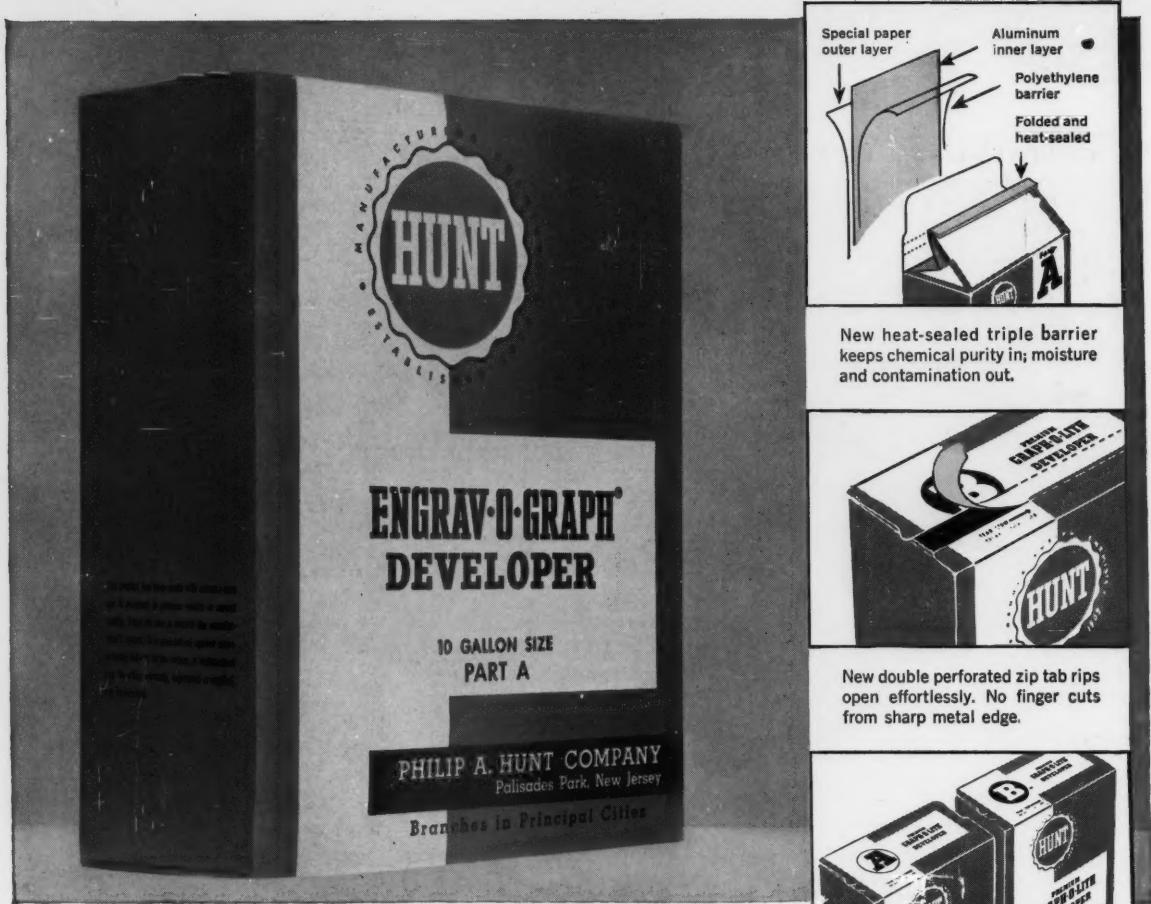
DEXTER'S McCAIN-CHRISTENSEN COMBINATION makes your saddle stitching and trimming operation *completely automatic*. You get all the advantages of continuous inserting, stitching and trimming when you team a Christensen High Speed Gang Stitcher with McCain Automatic Signature Feeders and a McCain Automatic 3-Knife Trimmer. Then watch output shoot up—automatic saddle binding will almost double your fastest manual production records. This is true even on runs as short as 1,000—it's so easy and fast to set-up and changeover on the McCains!

The savings in time and money are impressive—we'll be pleased to project a cost analysis for your own plant. No obligation, of course.

It pays to mechanize your saddle binding operation. After folding . . . insert, stitch, trim *automatically* with Dexter's McCain-Christensen Combination . . . then ship.

Write for new, informative 12-page book, "Three Steps Toward Automatic Saddle Binding."

 **The DEXTER Company**
A Division of Miehle-Goss-Dexter, Inc.
PEARL RIVER, NEW YORK



8 Introducing a new development **KEMPAK**

The perfect package for photographic chemicals

The Philip A. Hunt Company, in cooperation with the Gardner Division of the Diamond Gardner Corporation, has developed an application of the internationally famous Hermetet® carton for the perfect packaging of photographic developers and fixers. KEMPAK is a squared cardboard container of unique design with a special triple barrier inside liner of: Paper, Aluminum Foil, and Polyethylene. For this reason, KEMPAK keeps powder chemicals in laboratory fresh condition, completely free of moisture and contamination, almost indefinitely. It is easier to open and more easily disposed of, and being heat sealed, it withstands the roughest handling encountered in warehousing and shipping without rupturing.

As a new service to our customers in the Photographic and Graphic Arts Industries, many Hunt developers and fixers are now being packed in KEMPAK.

PHILIP A. HUNT COMPANY
PALISADES PARK, N. J.

Chicago • Cleveland • Cambridge • Brooklyn
Atlanta • Dallas • Los Angeles • San Francisco



New double perforated zip tab rips open effortlessly. No finger cuts from sharp metal edge.



Clear package markings prevent chemical mix-up in making solutions.



Square sided boxes store efficiently with no lost space in between, as with round containers.



Another Hammermill sales booster for printers

Here is the third in the new series of Hammermill advertisements appearing in Time, Newsweek and Business Week. Thousands of printing buyers will see it this month. It's another advertisement in Hammermill's 47-year campaign that helps you sell better printing—another reason why your customers will know you mean *quality* when you suggest, "Let's put this job of yours on Hammermill paper."

Hammermill Paper Company, Erie, Pennsylvania.

How to get
uniformly good office paper



1. The hard way:

Go to the paper machine and judge formation as the paper speeds by at hundreds of feet per minute—just the way Hammermill papermakers do. Take frequent samples and analyze them right away.

And, of course, find a way to unlock the secret of using hardwood to make an even finer bond paper—the way they do at Hammermill with their exclusive Neutracer® pulp.

When you get through your paper will have a finer surface for printing, typing and writing—a surface that erases better, too. But you eliminate all the fuss and the bother and still get the quality letterheads you want when you take . . .

2. The easy way:

Ask your printer for

**HAMMERMILL
BOND**

Choose Hammermill Bond to make a better impression. Printers everywhere use it. Many display this shield. Hammermill Paper Company, Erie, Pennsylvania.



5 REASONS WHY...*

WIPE-ON negative process

is SUPERIOR

PREMIUM is the *only* WIPE-ON process that *works* successfully on *both* zinc and aluminum *grained* plates — ball grain, brush grain, sand blast.

3.

With PREMIUM WIPE-ON process *YOU* select the metal, the thickness, the type of grain you prefer — from your own plate grainer. Re-grain and re-use plates for economy and results.



requires no pre-treated plate — has all the advantages of pre-sensitized and other pre-treated plates — and many more.

2.

PREMIUM is the *only* WIPE-ON that eliminates entirely the need for negative process pre-sensitized and pre-treated plates.

4. Exclusive PREMIUM WIPE-ON is used on *any* size zinc or aluminum plates . . . from the smallest multilith to a 58 x 77.

5. PREMIUM WIPE-ON means the best reproduction, easiest set-ins and deletions, smooth solids, best halftones from any size screen.

* Trademark

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- SURE DOT LITHO SUPPLY, INCORPORATED, 1636 West Van Buren Street, Chicago 12, Illinois
- WENZEL EQUIPMENT COMPANY, 810 Baltimore Avenue, Kansas City 5, Missouri
- WESTERN LITHO PLATE & SUPPLY COMPANY, 1927 South 3rd Street, St. Louis 4, Missouri
- ZENITH GRAPHIC SUPPLY, 4-05 Twenty-Sixth Avenue, Long Island City 2, New York

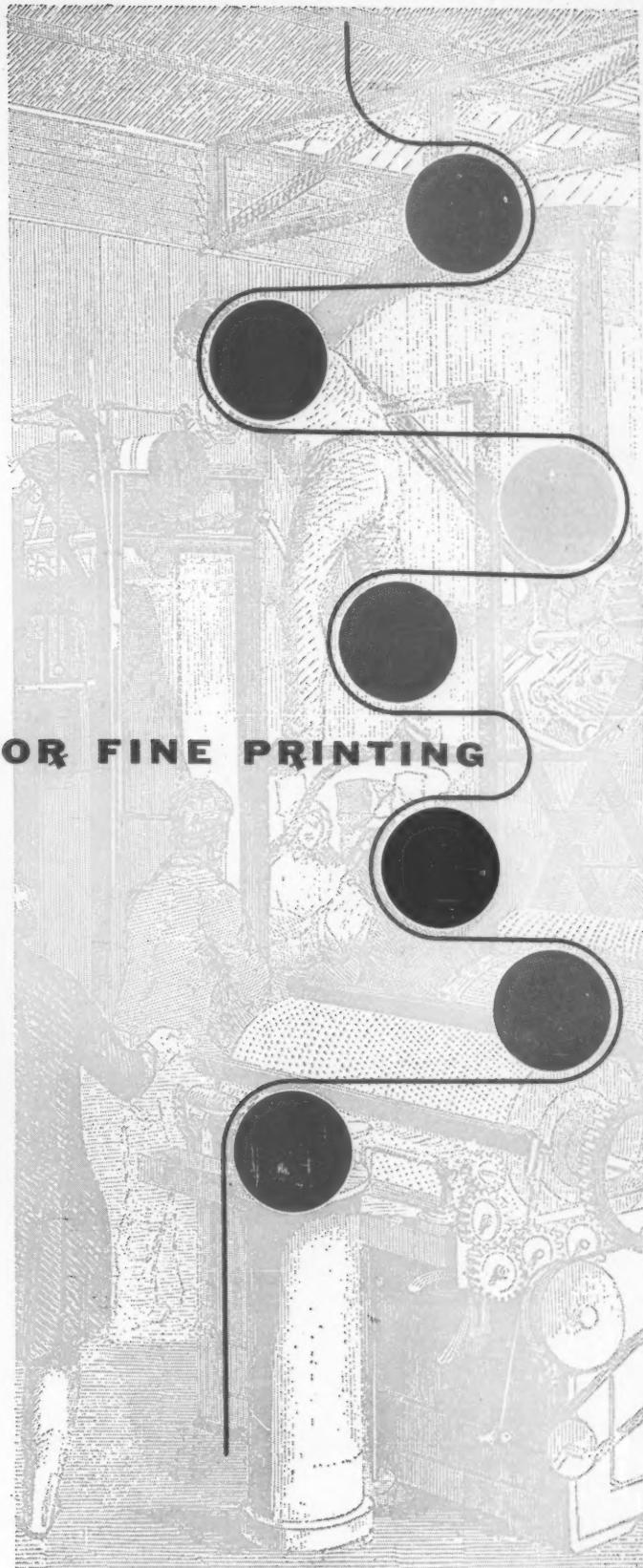
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dauid



Years of scientific research that have produced David M blankets, retain their consistency always. They keep their same thickness without regard to changing seasons, temperature or humidity. David M blankets never swell, shrink or change. They'll turn out more salable jobs per day, regardless of the length or speed of run, because David M litho blankets have maximum efficiency at highest speed.

GURIN-RAPPORT, INC.
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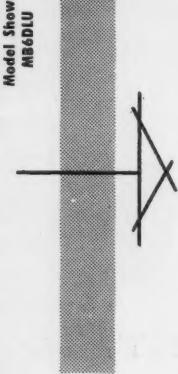


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CONDENSER TYPE WITH REGISTRATION
**ENLARGING AND
COPYING CAMERA**

CONDENSER TYPE WITH REGISTRATION

Here's the most versatile enlarger in the Graphic Arts field. Employing a universal light head, it can be used for making color separations direct through a mask, transparencies, filter and gray screen and gives a half tone negative on film. This unit employs a 1000 watt point source of light and a f/4.5 lens. It also uses a #302 500 watt enlarging lamp for continuous tone separations or half tone positives. Complete registration system with three-point registration is available. A vacuum easel and a punch with registration is also available to specifications.

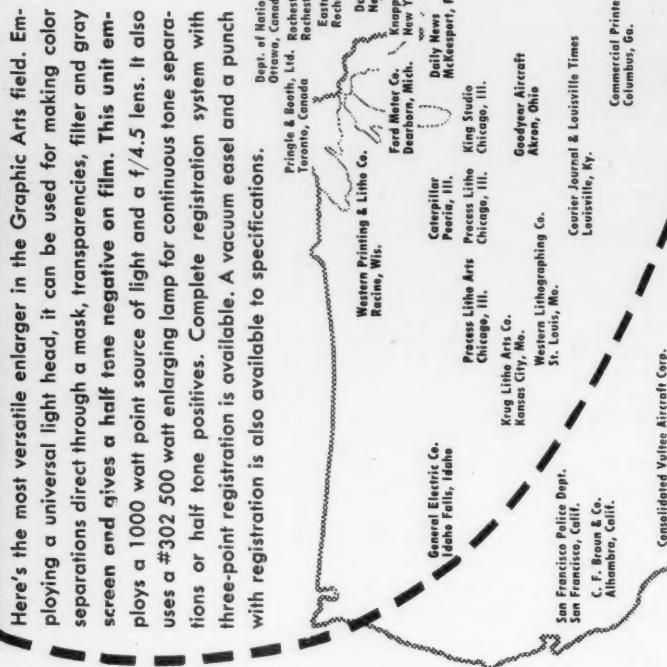
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MB6DLU



Accessories Available:

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COUNTERS ON CAMERA AND LENS MOTION



Illustration courtesy of MINNESOTA MINING and MANUFACTURING COMPANY

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TRADE-MARK

"National" and "Union Carbide" are registered trade-marks of Union Carbide Corporation

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Printers tell each other... and they tell us, too... that Nekoosa paper merchants are wonderful people to work with. Nekoosa paper merchants carry a complete line of papers for almost every printing requirement... and you can always be sure of getting the right paper for your job.

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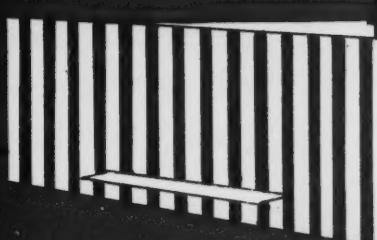
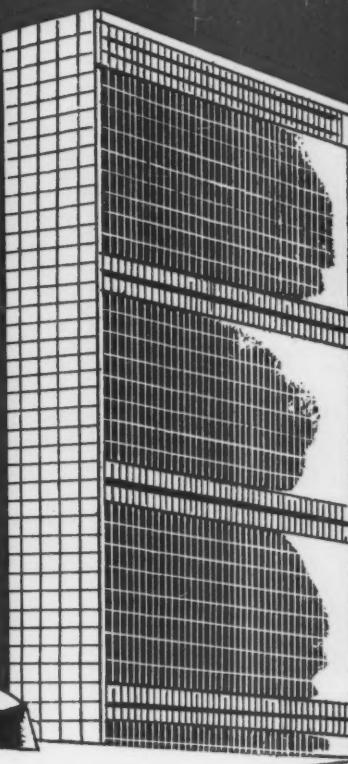
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MODERN



This is an era of great scientific improvement and progress—in the graphic arts industry, as in other fields. Mercury rollers and blankets enable you to make the most of this progress.

Mercury Extra Strength rollers are available for fast-drying high KB inks, which will not tack up on these rollers nor cause them to swell or glaze. Mercury blankets reproduce the sharpest dots and densest solids by kiss impression, because they are livelier and therefore better lifting, and have controlled stretch and even gauge. Make sure of the right roller or blanket for every job—go Modern with Mercury!

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of Quality!

One name stands out in almost every field of business. The name of Esther Williams is as important in swimming pool circles as Strathmore is in fine stationery. The two are handsomely paired in the distinctive letterhead of the International Swimming Pool Corporation, of which Miss Williams is President. The quality evident in Strathmore Letterhead Papers adds impressively to the corporate character of the companies whose names appear on them. A list of the company names, on letterheads bearing the Strathmore watermark, would be a roster of prominent firms throughout the country.

International Swimming Pool Corporation of White Plains, N. Y. is the exclusive manufacturer of Esther Williams Swimming Pools. Because of unique design features and new manufacturing techniques pioneered by International, it is now possible for the average family to enjoy what used to be a rich man's luxury.

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your customers
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papers. This
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will produce
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series
appears in:*

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Remember the good old days?

no hustle or bustle, no worries (or so the book says) and prices were lower than they are today. Modern Lithography can't transport you back to those carefree days, but we can make an offer to you and your friends that will remind you of those old-time prices.



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BY CHAMPION



—One of a series designed to demonstrate the printability of Champion Papers—

Falcon Enamel, developed for letterpress, gives top performance on high-speed presses. This insert on 80 pound basis weight shows results in black and white halftone, line and four-color reproduction. Falcon's demonstrated versatility suggests many uses for promotions, advertising and in general publication work.



THE CHAMPION PAPER AND FIBRE COMPANY
HAMILTON, OHIO

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Mansfield Sterling Paper Co.
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Oklahoma City Carpenter Paper Co.
Tulsa Beene Paper Co.
Taylor Paper Company

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PENNSYLVANIA

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(Division of Garrett-Buchanan Co.)

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Philadelphia Matthias Paper Corp.
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Austin Carpenter Paper Co.
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Fort Worth Carpenter Paper Co.
Harrington Carpenter Paper Co.
Houston Carpenter Paper Co.
Lubbock Southwestern Paper Co.
San Antonio Carpenter Paper Co.

UTAH

Ogden Carpenter Paper Co.
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VIRGINIA

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THE CHAMPION PAPER AND FIBRE COMPANY

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PREVENT THESE HEADLINES!

NEW YORK POST. WEDNESDAY, NOVEMBER 26, 1958

Carbon Tetrachloride Called a 'Deadly Poison'

The Health Dept. warned today that carbon tetrachloride, whether swallowed or only inhaled, "is a deadly poison."

THE NEW YORK TIMES. 12 DEATHS ARE LAID TO CLEANING FLUID

Board of Health Warns Users
of Carbon Tetrachloride
on Fumes and Misuses

At least twelve deaths in the
city last year were caused by use

THE NEW YORK TIMES. Plant Fumes Held Cause of Death

R.A.H.W.A.Y.—Fumes of carbon
tetrachloride used during a 3-day

Cleaning Fluid Blamed For Bone Marrow Damage

Chicago, June 18 (UP)—A New York City doctor said today



NEW YORK HERALD TRIBUNE, T

Margo Jones' Death Traced To Cleaning Fluid Fumes

DALLAS, Tex., July 25 (UPI)—Margo Jones, forty-two, Broadway producer, died last night in Livingston, her southeast Texas birthplace. Doctors said

SCIENCE DIGEST DANGER FROM CLEANING-FLUID VAPOR

Severe poisoning may result from inhaling vapors of noninflammable cleaning fluids, according to three doctors of the General Electric Company. The warning was contained in an article in the *Archives of Industrial Hygiene and Occupational Medicine*.

Carbon Tet Peril Cited for Users

By DELOS SMITH,
United Press Science Editor.
Medicine expressed its polite
alarmism today over the high

J.A.M.A., Oct. 8, 1955 Vol. 159, No. 6

CARBON TETRACHLORIDE POISONING

TO THE EDITOR:—Has carbon tetrachloride poisoning, either chronic or acute, ever been proved to cause any type of insanity or mental disturbance?

John T. Bate, M.D., Louisville, Ky.

STOP CARBON TET POISONING...USE SAFE ROBINOL

Right out of the pages of your newspaper come these stories of people who suffered illness and death because they were unsuspecting and unaware of the danger of carbon tetrachloride.

Many in the graphic arts industry have used carbon tet (perhaps you among them) to clean and degrease mats, magazines, spacebands, motors, type, film, lenses, glass etc. . . . and were lucky.

Union officials, health departments, safety engineers, labor departments, all have condemned the use of carbon tet, coal tar solvents, benzol and toluol and other chemical killers that have left in their wake people who have suffered and are now suffer-

ing from kidney ailments, blood and bone diseases, leukemia and cancer.

Robinol users can work worry-free because it contains none of these killing chemicals. Now, do all cleaning jobs in complete safety. And Robinol cleans better than anything you have ever used before. Its high solvency saves elbow grease as well as your health. Robinol cleans and degreases thoroughly. It works fast . . . dries fast . . . leaves no oily film. It will not corrode or disturb the false sidewalls of mats. Robinol is safe too, from explosion and spontaneous combustion . . . it will not burn. It's really safe—safe enough to use in your own home.

ATTENTION: STRIPPERS, CAMERAMEN

You can work safely now! Clean film and glass easily, quickly with ROBINOL, safe replacement for deadly carbon tet. Safe on acetate and vinyl film, lenses, filters, screens, vacuum frames, etc., to remove all smudges, fingerprints, tape adhesives and dust. Fast-drying ROBINOL won't damage, streak or cloud film. It's safe for your job . . . it's safe for you!

WRITE US TODAY! NO OBLIGATION OF COURSE!



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SOLUTIONS FOR GRAPHIC ARTS PROBLEMS
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ANCHOR CHEMICAL CO., INC.
827-837 BERGEN ST., BROOKLYN 38, N.Y.

Attention: Safety Director

Please tell me more! Send me

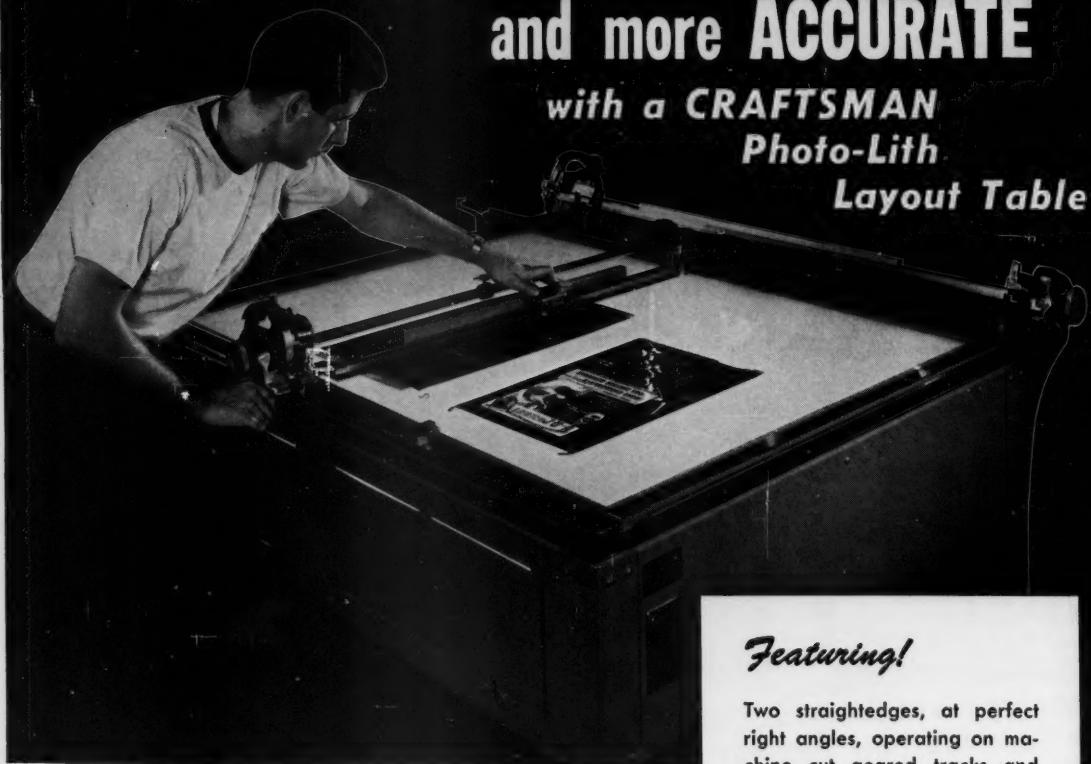
Health Booklet Product Information
 Quart 1 Gallon 5 Gallon can Drums

Company Name _____

Address _____

Attention of _____

line-up and register is **FASTER, EASIER**
 and more **ACCURATE**
 with a **CRAFTSMAN**
Photo-Lith
Layout Table



58
 Your time sheets . . . and your results too . . . will tell you the story of *Craftsman's* speed, ease of operation, and accuracy. You'll knock costs down and you'll get unequaled accuracy on even the most intricate jobs.

The Craftsman Photo-Lith Layout Table is an instrument of unparalleled precision . . . the result of over 25 years of research, development, and field testing. It is ideal for line-up, register, negative and plate ruling, copy layout, masking, stripping, opaquing, and checking work in process.

Get all the facts, send coupon for catalog.

Craftsman Line-up Table Corp.

Waltham, Massachusetts

Precision Line-up and Register Tables
 for Letterpress and Offset



Featuring!

Two straightedges, at perfect right angles, operating on machine cut geared tracks and friction-free ball bearings.

Vernier dials with calibrations as fine as 100ths; dials protected by anti-backlash gears.

Sheet stop guides and grippers.

Stainless steel scales.

Special marking devices for goldenrod layouts, scribing negatives and plates, and India ink ruling.

5 sizes with glass areas from 28" x 39" to 62" x 84".

Craftsman Line-up Table Corp.
 55-G River Street, Waltham 54, Mass.

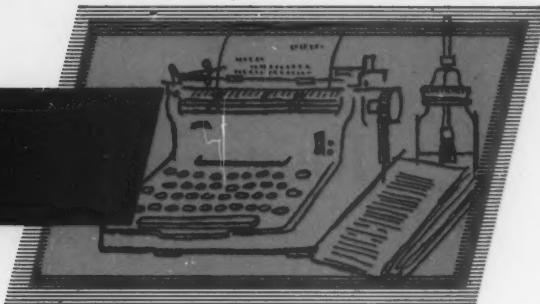
Please send free Craftsman Catalog.

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EDITORIALS



Encore for Phoenix

THREE had been signs that the LNA convention in Phoenix this year might be more successful than former meetings. For one thing, the new directors of the Lithographers National Association have not been content with resting their case for the lithographic industry on the many fine accomplishments of the past under the leadership of W. Floyd Maxwell and others.

Rather, the young and fresh leadership of Oscar Whitehouse has used these past successes as a starting point for a revitalized approach to trade association services to an industry that is just as much troubled by the recession as any other.

Reorganization of the LNA staff responsibilities and the shift of the main office to Washington, nearer to legislative goings-on, were two early signals that something was up at LNA.

Announcement that the association had expanded its committees to include one for lithographers who manufacture books was another sign. And the reception for old members, potential members and the press at New York's Union League Club a few months back was still another indication of the new approach being made by LNA.

Still, there were those who felt that there was too much lethargy to be overcome for the convention to be successful, especially since it fell at a time when many industry leaders were off to Brussels and DRUPA, and it was located at a spot that was, for many, thousands of miles from home and business.

But the LNA staff planned its convention thoughtfully and promoted it well. The advance publicity was well-timed and it was geared toward showing lithographers that they could get valuable information from the busy business meetings and still have

time for a pleasant vacation under the hot Arizona sun. The special plane flights from New York and Chicago and the post-convention fling at Las Vegas were tempting added attractions.

So the large and enthusiastic turnout of lithographers at the Arizona Biltmore last month (and the well-attended business sessions) really should be no surprise to those who had been watching the recent activities of the LNA staff. No finer tribute to their confidence in a busy program at an attractive (if distant) resort can be found than the recent announcement that the LNA board has scheduled Phoenix for a return visit in 1961, following the Greenbrier and Boca Raton. Members are advised to keep their square-dancing regalia handy for a repeat performance!

Under One Roof

THAT the letterpress process and the lithographic process are entirely separate—though related—operations is a position which this magazine long has maintained.

Support for this concept came last month from Raymond Blattenberger, in a talk at the LNA convention. (*Complete text, May ML, page 39.*) The Public Printer remarked that, although offset operations had expanded over the years in the Government Printing Office, once an entirely letterpress shop, the direction of offset activities had been inefficient. "Five superintendents shared the responsibility for lithographic production—too divided a control for the most efficient use of the process," he noted.

When Mr. Blattenberger established a division of offset in 1954, with responsibility for all offset operations vested in one superintendent, not five,

(Continued on Page 122)

how YOU stand to gain from

Reinvestment Depreciation

By *Frederick T. Marston*

President, The Kaumagraph Co.
Wilmington, Del.

HOW many members of our industry have plants which are as modern and up-to-date as they ought to be? Is there some obsolete machinery which ought to be scrapped or disposed of in some way in your plant? I have heard a good deal of talk about obsolescence and have heard several definitions of it, but to me, as a practical businessman, any piece of equipment which can be replaced by another which can do the same job cheaper, quicker or better, is obsolete, and the process of getting to this point is what I think obsolescence means.

Growth in our industry has been made possible by improvements in equipment and processes. Every time a process is developed which will do good work cheaper or faster, we open up new markets. Years ago, when color printing was comparatively expensive, the market was limited. Now, with all our improved methods, almost anybody who does anything with paper, can afford to have it decorated with good effective color work.

Caught in a Dilemma

This means that we just can't afford to try to operate with obsolete machinery. But it has seemed in the last few years to be equally true that most of us just can't afford to buy the equipment we need to take the place of our obsolete presses, binders, platemaking equipment and all our other machinery. The principal reason why we are prevented from maintaining our plants as they should be, with modern equipment, is that we pay out in taxes what we should invest to keep our plants up to the

Author Marston studied at Philips' Exeter Academy, Friends School in Wilmington and the Wharton School of Finance, University of Pennsylvania. He was shot down over Paris while serving as an officer in the Air Force in July, 1943. After several years as a prisoner of war, he returned to the United States and became a sales representative, purchasing agent, sales manager and in 1953, president of the Kaumagraph Co.

He is active in trade association matters, being chairman of the Labor Relations Committee of LNA and a member of the board of directors of Printing Industry of America.

proper standard of efficiency and quality, and the reason for this is that we do not get back in depreciation allowable for tax purposes what we spent originally for our machinery and equipment.

But, you may say, we do get back the cost of our machinery and equipment in depreciation. It may take a little too long, but we eventually get back the same number of dollars in depreciation as we spent. That is true, but they are not the same kind of dollars and they are not worth as much. When we try to go out and buy a press today, we find that it is just impossible to replace the same press or a similar one for the same number of dollars. In my testimony before the Ways and Means Com-

mittee of Congress in January, I gave an example of this, taken from the experience of my own company.

We purchased a press in 1935 for \$31,400 and replaced it in 1950 for \$83,400. Four years later we bought another press of the same kind and paid \$111,800 for it, and if this press were replaced today it would cost approximately \$128,000. This is typical rather than exceptional. Similar examples could be produced by litho plants in great numbers.

Seek True Value

What the businessman is entitled to is to recover the true value of his machinery and equipment through depreciation rather than to recover merely the same number of dollars. The justice of this proposition cannot be disputed. Nor can its benefits to both the industry which uses the equipment, in our case, the lithographic industry, and the machinery industry which manufactures lithographic equipment, binders, and all the other equipment we need, be doubted.

The real difficulty is not in stating the problem nor showing its importance to the business community. What is difficult is to develop a sound and sensible way to make it work. Like most members of the industry, our company has been puzzled and worried by this problem for a long time, but found no answer to it which seemed to me to be practical and workable until the method known as reinvestment depreciation came to my attention last year.

This reinvestment depreciation method is the same in principle as

(Continued on Page 135)

helping the STRIPPER

do a better job

By *K. W. Beattie*
Photographic Specialist

THE stripper's position on the offset team corresponds to that of the stone or lock up man in the letterpress shop. Both are the hubs in the production wheel of their printing plants. One works with hot type and engravings; the other works with pieces of photographic film. They both must make the puzzle pieces fit together to form a composite which can be put on a printing press and produce pleasing printed or lithographed pictures.

For our description of the position of the stripper in the offset plant, we will use the analogy of a successful catching star on a big league baseball team.

The catcher is the most important man on a ball team. He does the brunt of the work, and he must know all the signals. He makes the important decisions.

The photographer can be compared to the man on the pitcher's mound. He usually is somewhat temperamental. He has his good days for strike outs (perfect negatives), but can lose control and pitch out a batch of sub-standard negatives any time. Then the stripper has to walk out and have a conference to get him back in the groove.

The platemaker is something like the first baseman on the team. He is always looking out for foul balls and wild pitches. He has the final responsibility for the quality control of the offset plate before it is wrapped on the press.

The pressmen are the other infielders on the offset team. They can't afford to be charged with errors and must be backed up by the other team members all the time. Just as it is on the diamond, it is team work in the litho shop that will beat a team of individual stars anytime.

The stripper must be equipped with modern equipment and accessories. True, his personal skills are very valuable, but his working tools are of utmost importance to everyone on the production line.

Eyes Most Important

The most precious possession that the stripper owns is his eyes. He should have them examined every six months to find out if they are in "sharp focus" for the fine work that he must perform. New glasses are a must to help and preserve his eyes, if eye tests so indicate.

Now, after we have the stripper's eyes in excellent focus, he should have one of the most important and least used shop aids to evaluate the printing quality of the thousands of pieces of film which will pass through his hands every month.

The microscope is being employed in color shops and many leading black and white shops. It should be available in all progressive shops as a quality control instrument. It is not necessary to purchase a \$50 'scope; a good students' \$10 or \$15 unit with a big light under the table is satisfactory for visual inspection.

This rapid visual inspection will permit the stripper to see how the arc light bombardment will affect the light-sensitive surface of the plate emulsion *before* each negative is stripped up. The stripper can examine fine lines and halftone dots through a 'scope to determine their printability. If they show up ragged, foggy, ghosty, fuzzy or dirty, that's the way they will print down on the offset plate. The point to remember is that a negative is only as good as its print on metal. Let's use only good printing negatives.

The stripper must evaluate halftones, not only with 17,000 (133 screen) black and white dots, but also (in ultra-modern shops) 30,000 dots (175 line). He must be supplied with a superior inspection tool to the ordinary 12x power magnifyer in common use. This is not a quality control unit.

The individual (12x) magnifying glass should be set carefully for sharp focus for the user's eye. No two men have exactly the same eye focus, so someone else's glass usually is out of focus if it is borrowed for a fast look.

Knives, Brushes and Tools

Every stripper should have his own set of good brushes, knives and drawing tools. They should always be kept in one place, not scattered around the office. A medium-sized hand glass is an excellent tool to inspect a close fit or help with cutting in fine lines.

Another important hand tool for the stripper is a bridge. This is usually hand made. It is simply two blocks of wood glued under a ruler (with a thin metal straight edge). This tool can be used to support the hand



in close brush opaques, ruling in lines, touch ups, and other fine area work. The main feature is that the hand can be supported "off the work" and better finger control can be assured without wobble and without fatigue to the arm. While there are many other gadgets available to the stripper, let's not forget the fine sandpaper or sharpening stone for his cutting blades. A dull knife makes for ragged lines and thick double cuts.

I am of the opinion that the stripper's light table is the most important piece of operational equipment in the entire offset shop. Anyone calling it just a "light box" shows his ignorance by sneering at a key machine. It is a basic quality control machine and it should be designed to permit the stripper to work more efficiently and with less physical strain and nervous tension.

There are many excellent stripping tables on the market today to choose from. The following suggestions are made in the spirit of making the stripper's working day easier.

Add One Gold Lamp

The usual fluorescent white or daylight lamps are deficient in red. They lack a complete spectrum, so to compensate, I suggest that you have the shop maintenance man put one "gold" lamp in every stripping unit. The human eye is very friendly to yellow—it's soft. It's easy to look at yellow. Blue is cold and harsh; green is a bit too vivid. Try this suggestion of mixing in a combination of yellow and white. It will increase visibility and relieve eye fatigue at the same time.

Here's another valuable addition your shop maintenance man can make to help the stripper's eyes see more. Have a 75-watt reflector flood light inserted into the bottom of the stripping table with a convenient off-on switch outside.

Whenever the stripper wants to "see for himself" how good or bad the arc light will bombard any negative and plate, he can flick the flood light on (it should be located near front center of the stripping table glass) and inspect it with his own 10x magnifier. The secret is that the flood light bouncing through the negative will permit a correct evaluation of the printability of the negative. While this method is not as exact as the 'scope, it will give an excellent evaluation for a skillful stripper's eye.

Next the stripper should have a movable top light on his table glass. This can be a \$4 goose neck lamp, but it must have a bright yellow (40 watt) lamp. This yellow light will "light up" the top of the negatives, and permit



the stripper to see the point of his brushes or knives all the time. It is almost impossible to make a miss opaques if the stripper can see his working tools. The yellow light will not be very noticeable because it will not mix or interfere with the light coming up from underneath the glass. Of course, the overhead light can be a more expensive unit, but we do not recommend "gold" fluorescent; just a good yellow lamp will make the stripper's work day considerably easier.

Careful consideration should be given to the modern methods and tools used to square up the work on the light table.

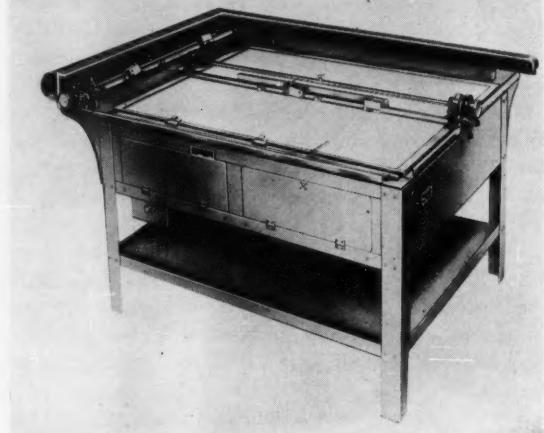
The most common and difficult to control is the long steel T-square. This tool has to be critically positioned and then held in place. It will shift at the wink of an eye and the further away from the guide T bracket, the bigger the opportunity for a slip from its original hand setting. The stripper has to be an expert magician to keep it on the line all the time.

T-Square with Magnets

The T-square with a set of magnets will permit the stripper to set the square and then work with both hands free. It may not slide up and down as fast as the free T-square, but once set in position, it will stay there until physically moved to a new position.

This magnetic type of square has a preset precision feature and will permit negatives to be slid under it without disturbing its magnetic fixed position on top of the glass. (*It is available from the Harold M. Pitman Co., 515 Secaucus Rd., Secaucus, N. J.*)

A number of different stripping tables can be purchased with a sliding metal straight edge. The up and



Craftsman Line-up Table

down movement is controlled by wheels with a chain sprocket drive. When a wide sheet is being laid out or stripped up, this sliding straight edge offers a number of time-saving features. All the lines will be parallel all the time. The operator's hands are free to work without the hazard of off square slides of the straight edge. The hand wheels permit rapid and fast moving adjustments.

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the contest was for design, but the prizes were won in the pressroom

By H. H. Slawson
Chicago Correspondent

CHICAGO printing craftsmen saved the day for the Society of Typographic Arts, whose 31st annual "Design in Chicago Printing" exhibition was on view in that city's Art Institute April 11-May 18.

Judges were so unimpressed by the work of the designers that they threw out 95 per cent of the more than 2,000 entries produced in the Chicago area during 1957. Then, only after considerable ardent discussion, they agreed that 111 pieces measured up fairly well to the STA standards and were worthy of the Certificates of Excellence awarded by the Society.

In most cases, it was learned, selection of these 111 winners was largely influenced by the effectiveness of the job done by lithographers and printers on the designs they had been given to work with.

The intensity of the effort put forth by the printers to make a fine product

Printing for these STA winners was done by H. L. Ruggles & Co., top, and the Veritone Co.

was readily apparent from examination of the display in the Art Institute gallery reserved for the show. The real truth, as one observer remarked, is that Chicago's pre-eminence as a graphic art center has been won because of the high standards of craftsmanship maintained in the printing medium.

One of the three judges, in commenting on the rejected pieces, said they impressed him as "too fussy, loaded with current frills, lacking in the humorous touch and badly planned for their purpose." A possible explanation, he thought, was because Chicago designers have been so close to the German Bauhaus school of design. To some extent, he said, Chicago designers are "getting over"

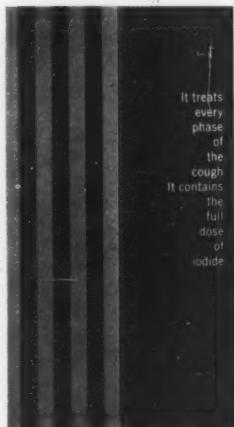
this influence and their work is "improving."

At the dinner which preceded the opening of the exhibit, there was considerable discussion, for and against this position. All were agreed, however, that, as to the mediocre character of commercial art design, Chicago is no worse off than New York. In the latter city, the competitive situation is such that, as one judge conceded, designers there perhaps do produce a better product.

Among Chicago lithographers whose work was represented among the 111 award winners the Veritone Co. led the list with nine pieces, entered in the brochure, poster, stationery and booklet classes. H. L.

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These pieces were lithographed by, (l-r) Magill-Weinsheimer Co., Hillison & Etten Co., and Case-Hoyt Corp.





A. A. Wade, new president of Southern Graphic Arts Association

SGAA Hears Full Program, Elects Wade at Louisville

THE Southern Graphic Arts Association, one of the smaller trade groups in the industry, nevertheless each year puts together quite a formidable program. This year, at the 37th annual convention in Louisville, April 19-21, the program was one of the association's finest, and more than 100 representatives of management in the southern states were on hand to appreciate it.

Virtually all of the members on the SGAA have some lithographic equipment in their plants, and the program at the Brown hotel reflected this interest in great measure.

Accompanying the convention was the 19th annual Exhibit of Southern Printing, on display in the hotel lobby. (MODERN LITHOGRAPHY, in attendance at the three-day convention, found the exhibit to be one of the finest of its type in the country.)

Officers and speakers at SGAA: (l-r) Harold W. Braun, elected 1st vice president; Harold N. Cornay, Press of H. N. Cornay; Charles E. Kennedy, secretary treasurer; J. Tom Morgan (rear)

Mercury Lithographing Co., of Miami, was a repeat winner of the grand award in the exhibit, with a brochure in color produced for the Americana Hotel of Miami. The company had won the top award two years ago. Other companies winning several awards were the S. C. Toof Co., Litho-Krome Co. and Western Lithograph Company.

Elected to head the association for the coming year was A. A. Wade, president of S. B. Newman Printing Co., Knoxville. He succeeds J. Tom Morgan, of the Litho-Krome Co., Columbus, Ga. Harold W. Braun, of Fetter Printing Co., Louisville, is 1st vice president.

Three Weaknesses

Three basic causes for the failure of the printing industry to maintain its position among other industries in the country were offered by Col. H. R.

outgoing president; Col. H. R. Kibler, president, PIA; Otis E. Wells, president of NAPL; Frank R. Turner, Jr., cost accountant, NAPL; and Dr. Paul Hartsuch, Interchemical Corp.



Kibler in his keynote address to the convention.

Colonel Kibler, who is president of Printing Industry of America, cited these weaknesses:

1. The printing industry is probably the most decentralized of all American industries.

2. It is made up of many small units. (Of 30,000 printing organizations, at least 29,000 employ fewer than 100 persons.)

3. The industry has lost its monopoly in mass communication to the telephone, television, etc.

He called for greater support of trade associations, national and local, and increased contributions for research to guarantee a bright future for printing, despite the current recession.

Both Charles E. Kennedy, secretary-treasurer of SGAA and executive director of the Southern Institute of

Graphic Arts, and Harold N. Cornay, discussed the future of printing education.

Printing Education

"Printing education is challenged today by the very persons who stand most to gain from it," Mr. Kennedy declared. He traced the growth of formal printing education from its roots in the manual training schools to the present time.

Two chief drawbacks to the expansion of the program, he added, are a shortage of adequately trained teachers and a lack of enthusiasm toward the printing schools by printing and lithographic executives.

Mr. Cornay considered the role of scholarships in helping to eliminate the shortage of skilled craftsmen in the industry. He explained that for as little as \$45 a month, a printing or lithographing shop could send a boy to school at the SIGA, in Nashville. The figure is about \$150 to include room, board and travel. (At present the school is training about 70 students.)

Following are brief reports of other talks and presentations given at the meeting:

SHORT RUN THREE-COLOR AND OTHER DEVELOPMENTS, *John McMaster*, Eastman Kodak Co. Showed how three-color process color system has enabled many office buyers to step up from black-and-white jobs to full color. Developed to fill a need for inexpensive color in technical manuals, but now used largely in postcards, brochures, record and book jackets, etc. Approximately 100 lithographers in U. S. producing it in one way or another. Mr. McMaster noted briefly eight other ways to use color, including Kodachrome, Ektachrome, Extacolor, Ektachrome, dye transfer, etc.

LABOR PROBLEMS, *Harold S. Hutchinson* and *John H. Doesburg, Jr. Hutchinson*: Big emphasis in negotiations now is not money but "fringe benefits." These include a variety under the following general headings —paid time off, premium pay on special days, health and security, and bonuses. Fringe costs per hour are rising much faster than wage costs. (At Mack Printing Co., fringes now

cost 46 cents an hour and wages, 60 cents). Fringes are expensive but go a long way toward keeping employees happy. *Doesburg*: Management has lost its leadership, largely by default, to union leaders, who have found out what workers need and then supplied that need. Chicago newspaper strikes showed unions their greatest disciplinary device—threat of ineligibility for pensions if workers did not obey union leaders. Congressmen sympathetic to management are stymied in passing legislation because support from management leaders is too little and too late.

CONTROL OF HUMIDITY, *John L. Kronenberg*, S. D. Warren. Basis of problems in pressroom is the fact that air and paper act as sponges, competing with each other for moisture. Paper reacts to gain and loss of moisture by distortion. Use air-conditioning to control humidity, or humidifier, if you can't afford the former. Too expensive to maintain ideal conditions, but at least make a calculated compromise. Rule of thumb is 10° drop in temperature increases humidity by one-third; 20° drop doubles it; 10° gain cuts RH by one-quarter, 20° gain cuts it one-half.

BEHIND THAT CAMERA, *Victor Keppler*, consultant. Cooperation is the key to successful production of a printed or lithographed piece. You must learn the client's problems and requirements, and you must consider the art work, engravings, printing process and all other factors ahead of time to do the job in the best way. Mr. Keppler showed transparencies and photos to illustrate his talk. In one case he showed how an extra run of pink on red gave a lithographed job real snap.

BALANCED INKS, *Dr. Paul Hartsuch*, Interchemical Corp. Theoretically filters should let only certain colors through, and block others completely, but it doesn't work that way in practice, so color correction is required. Dr. Hartsuch found that certain pairs of inks provided just the right proportion to give faithful color reproduction. Using a Welch Densichron, he determined which magenta worked

(Continued on Page 141)



Mercury Receives Grand Award

SGAA Award Winners

Following are award winners in the 19th annual Exhibit of Southern Printing, displayed at the SGAA convention:

ANNOUNCEMENTS AND INVITATIONS: Award of Merit and Honorable Mention—S. C. Toof & Co.; **BUSINESS CARDS**: A. M. and H. M.—S. C. Toof & Co.; **BUSINESS FORMS**: A. M. and H. M.—The Rein Co., H. M.—Maneke-Kinzie Printing Co.; **CERTIFICATES**: A. M.—S. C. Toof & Co., H. M.—Courier-Journal Lithographing Co.; **BUSINESS STATIONERY**: A. M. and H. M.—S. C. Toof & Co.; **LETTERHEADS**: (Letterpress or Litho): A. M.—E. S. Upton Printing Co., H. M.—Colortone Press, Brunner, Inc., Marshall and Bruce Co.; **LETTERHEADS** (Engraved): A. M.—S. C. Toof & Co., H. M.—Geo. D. Barnard Co. **ENVELOPES**: No Award; **TRANSPORTATION TIME TABLES**: No Award; **POSTERS**: A. M. and H. M.—R. M. Rigby Printing Co., Inc. **POINT-OF-SALE DISPLAYS**: A. M. and H. M.—Fetter Printing Co.; **STATE, CITY AND NON-PROFIT INSTITUTIONAL PROMOTION AND PUBLICITY**: A. M.—Democrat Ptg. & Litho Co., H. M.—Journal Printing Co.; **FOLDERS**: A. M.—Litho-Krome Co., H. M.—Commercial Printers, Inc., The Egan Co.; **SALES CAMPAIGN**: A. M.—Litho-Krome Co., H. M.—Western Lithograph Co.; **BOOKLETS AND BROCHURES**: A. M. and H. M.—Mercury Lithographing Co., H. M.—Clegg Co., Parthenon Press;

MANUFACTURERS' CATALOGS: A. M.—Paragon Press, H. M.—Williams Printing Co., S. B. Newman Printing Co.; **DISTRIBUTORS' CATALOGS**: A. M.—Robinsons Printers, Inc., H. M.—Western Lithograph Co.; **MAPS**: A. M.—Western Lithograph Co., H. M.—Robinsons Printers, Inc.; **INSERTS** (Package and Mailing): A. M. and H. M.—Litho-Krome Co., H. M.—Mercury Lithographing Co.; **LABELS** (Package and Wrapper): A. M. and H. M.—Press of H. N. Cornay, Inc., H. M.—Brandau-Craig-

(Continued on Page 141)



Litho on Foil

Dear Sir:

Will you please send me a copy of your comprehensive article on "Litho on Foil" and any other information you might have regarding this process.

Gordon H. Norris

Litho Composition and Plate Co.
Boston

We have no more copies of "Litho on Foil," but you will find a thorough coverage of the subject in the article by James Trousdale in the Technical Section of the May, 1958 issue of *ML*. You might consult a technical library in Boston for the first article, which appeared in the April, 1956 issue.—*Editor*.

SGAA Convention

Dear Sir:

Besides those wonderful LNA awards, the April *ML* carried two nice write-ups on the coming Southern Graphic Arts Convention in Louisville.

As president of the SGAA, may I thank you for giving our convention such a nice send-off? This is going to be one of the best conventions we have had and it is our hope that you will find time to attend it. As you know, we have a splendid program of speakers and several social events which you would enjoy.

Thanks again for the fine coverage given our convention. We hope to see you in Louisville.

J. Tom Morgan, Jr.
President, SGAA,
Atlanta, Ga.

With such a nice invitation, how could we refuse? See our picture story elsewhere in this issue.—*Editor*.

Mailings for Hardware Store

Dear Sir:

We would like to see a sample copy of *MODERN LITHOGRAPHY*. We have both a Multilith and printing equipment—a fairly good operation for handling all our needs in printing, direct mail and house organs.

We have developed a plan of calling on new homes. Many have and are being built in our territory. The cover enclosed is used in connection with a very attractive and informative garden book which we present to each home owner as we make the call.

We also present a certificate for an attractive household gift, when presented at the store. This is for the women. For the

man of the house we present a deep sea fishing trip with our compliments . . . Our personal call man spends about four mornings a week on this work . . . we have found it not only a real business producer but a builder of goodwill with both the housekeeper and the man of the house.

Thought that you might like to hear from one progressive merchant on his plan of developing business.

E. C. Wimer

Gulf Beach Paint & Hardware
St. Petersburg, Fla.

Sounds like some excellent promotional ideas, involving a considerable amount of lithography, in this case handled by a "captive" shop. Perhaps litho salesmen can adopt this idea in selling printed material to local merchants, in other sections of the country.—*Editor*.

Text Book on Litho

Dear Sir:

We receive your magazine every month and are wondering if it would be possible to purchase a simple text book on lithography.

Homer Earl,
Earl Litho-Printing Co., Inc.,
Menasha, Wis.

Suggest that you write to the Lithographic Technical Foundation, 131 East (Continued on Page 135)

Meetings

Web Offset Section, Printing Industry of America, Edgewater Beach Hotel, Chicago, June 5-6.

8th Annual Southwest Litho Clinic, Rice Hotel, Houston, June 20-22.

Technical Association of the Graphic Arts, annual convention, Beverly Hilton Hotel, Los Angeles, June 23-26.

International Association of Printing House Craftsmen, 39th annual convention, Hotel Statler, Detroit, Aug. 10-13.

National Association of Photo-Lithographers, annual convention, Statler Hotel, Boston, Sept. 10-13.

National Metal Decorators Association, Penn-Sheraton Hotel, Pittsburgh, Oct. 6-8.

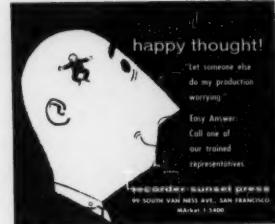
Printing Industry of America, 72nd annual convention, Hotel Statler, Dallas, Oct. 13-16.

Three's a crowd

Four's a group

See Page 33

Sell Litho

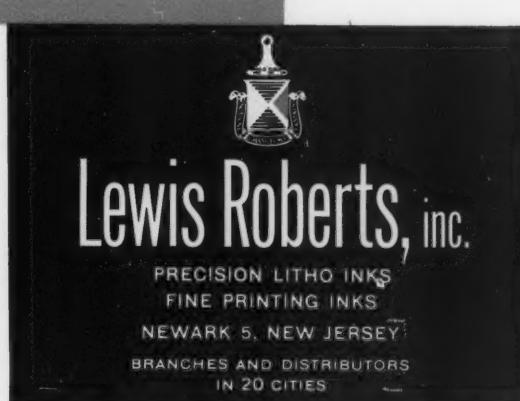


RECODER-SUNSET PRESS, San Francisco, is a combination shop which does a lot of newspaper and other publication work by letterpress and is doing an increasing amount of multi-color advertising and point-of-purchase work by offset. The company operates five litho presses, from 17" x 22" to 42" x 59".

To build business, *Recoder-Sunset* has launched a self-advertising campaign utilizing bright red post cards with line drawings and a minimum of copy, emphasizing such things as production help, color printing, service, speed and variety of type faces. Myron Wacholder, sales manager, says the cards have been very successful, mailed at three to four week intervals, having resulted in an order from at least one national company.

Have you had an idea for a novel use of offset, or have you played a part in selling such a job? If so, why not share your experience with other readers in this column? If response warrants, it will be a regular feature in *ML*. Please send a sample or photo with your letter.

LIGHT SPEED inks . . .



FOR

LITHOGRAPHY AND

LETTERPRESS

LIGHT SPEED INKS, press proven for your protection, have exceptional working properties. Trapping is no problem with these scratch resistant printing inks. They dry in minutes with a good gloss on coated papers.

These revolutionary high polymer printing inks will help you meet today's accelerated production schedules. LIGHT SPEED INKS are available in 15 standard colors, also special shades and black. Try them—see for yourself how well they perform.

New Developments in *Lithography* *and some thoughts for the future*

By *John W. Rockefeller, Jr.*

J. W. Rockefeller, Jr., and Associates

THE production of any piece of printed matter used to be approached in pretty much the same manner as turning out a piece of correspondence, in which you employed one of the standard makes of typewriters and a typist to operate it.

There was no problem and very little opportunity for the exercise of original thinking in the mechanics of the task. This used to apply pretty much to turning out printing. You employed any one of a number of standard flat bed letterpresses, sheet folders and guillotine cutters. Type was set by hand or by one of the few standard makes of hot metal casting machines, for like correspondence, printing was produced on standard equipment, which had seen little if any change in 50 years. There were plenty of trained operators available, experienced on most of it.

Today the cost of producing almost any piece of printed matter by the old methods would be prohibitive. Be it a book, a bank check, a tag, an office form, almost anything you can name, specialized equipment, designed and manufactured for a single purpose has cut the cost by from 50 to 90 per cent.

The new approach begins with a critical study of the item to be manufactured itself. Should it be made of paper, board, plastic or metal or a laminated combination of two or more of them? Should it be one color or more? What is the best contour or outline? In what quantities will it be produced? If it is coated with an

From a talk presented at Carnegie Institute of Technology Seminar, April 19.

adhesive (as a label) will the adhesive be an animal or vegetable gum, plastic or pressure sensitive? Will its finished form be die cut or in rolls? How will it be used?

These questions must all be discussed, debated and answered not only against a background of a wide acquaintance with printing equipment and methods but in the light of a knowledge of the engineering and chemistry in back of them, for it is altogether possible that the best solution to the problem will entail the development of ways and means that are brand new.

If ever there was a time when original thinking offered swift rewards it is now; if ever there was a field abundant with returns for creative effort it is the processing of paper and the combining of it with ink. An industry which for decades remained virtually static has suddenly become one of the most dynamic in America, offering a stirring challenge to the best brains of our generation.

It was but a short time ago that the only method, in common use for putting ink on paper was through direct contact with paper of an inked form, type, electro or stereo, and about the only inexpensive equipment was the old fashioned flat-bed letterpresses.

Growth of Offset

Since that time, offset printing has gone far in crowding it out of the modern printing picture. The objections to early offset—the short life of the plates, the lack of lustre in the printing, the necessity for pulling repro-proofs from a form made up of

metal composition and cuts—all have been overcome.

Gravure has made tremendous strides, particularly in the packaging industry. Dry offset has been used successfully where other methods have been found wanting, and direct printing on high speed rotary equipment from flexible wrap-around plates, appears to be not far away. It has become necessary in the determination of methods and means to exercise not merely the superficial individual preference that one might indicate in the selection of a motor car but a considerable amount of ingenuity backed by a wide experience. It is necessary to make an intelligent and detailed study not only of what you propose to make but also the many items that you have no intention of making. It is imperative that you give due consideration not only to the method you are going to employ, but to the many methods that you will eventually rule out in your final selection, for it is only through such a painstaking and seemingly paradoxical procedure that you will have a favorable chance of success.

Is it a paperboard container for a bulk commodity that you have in mind? What is the future of the commodity itself and where will you find yourself and your investment if some substitute replaces it in the public favor? Is paperboard the best all around material for the container or is aluminum likely to replace it, if for example, means are developed for printing on aluminum at high speeds?

You have eventually satisfied your



Illustration by courtesy of The Bermuda Development Board and J. M. Mathes. This insert is printed by offset on Cantine's Zenogloss 25 x 35-80. Plates are "conversions" made from black repro proofs of the letterpress originals.

PLAN FOR QUALITY ! *Distinguished printing—on brush-coated paper such as Cantine's—has brought prosperity to remote places, and done much to make Travel one of the top industries of the world. With brush-coated paper, distinguished printing is attainable, practical, economical for any industry that knows quality and insists on having it.*

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LETTERPRESS

Hi-Arts
Ashokan
M-C Folding Book
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Zena
Velvetone
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Esopus Tints
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Insert is printed by offset on 25 x 38-80 Cantine's Zenagloss Offset Coated (2 sides).
Illustration shows "Ethan Allen" Early American by Baumritter, New York.

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Cantine's

LITHOGRAPHED ON 25 x 38-80

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OFFSET COATED (2 SIDES)

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60	120	186	240	70	58	98	118	140	232	260	
80	160	248	320	80	66	112	138	160	266	320	
100	200	310	400	100					200		

ZENAGLOSS (TEXT)

THE MARTIN CANTINE COMPANY

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self that you have evolved the best method for producing the item in the quantities required. Where will you be if the demand doubles or increases 10 times? After all, you are investing anywhere from \$50,000 to \$1,000,000 in a piece of equipment and it should be commercially useful for several years to come, if not for its originally conceived purpose, then, for something else.

No, I fear, the problem is not simply one of immediate needs; there is growth to consider, growth of the country's population, its economy and education. Ruling out such a catastrophic occurrence as another world war, (in which case all plans are pretty certain to prove equally futile) the growth factor is reasonably sure and a sound foundation on which to build.

Are there other equally sound assumptions which will aid in the solution of the manufacturing problem? Another, I feel, is that the purchasing power of the dollar in the labor market will continue to decline. Wage increases are popular and since it appears impossible for technological advances to keep up with them, the alternative is inflated currency.

If this assumption is valid, the passage of time, as well as the growth of the country, will operate to the justification of large investments in labor saving equipment.

When fly boys were receiving 35 cents an hour, the cost of stacking signatures by hand as they came off the folders of magazine presses was not too interesting a field to explore in the general scope of cost reduction.

With the hourly figure at \$2, it becomes worthwhile. If we can purchase mechanics' time today at \$3 and preserve it in a mechanism which will save the time of fly boys at \$5 an hour 10 years hence, it may well prove to be a better hedge against inflation than common stocks of the growth variety.

Other Factors

If we add to the obvious advantages of labor saving equipment, the fact that time is in its favor through population growth, increased income and inflation, the desirability of investing in new equipment of advanced design

becomes irrefutable. If the advantages of the labor saving machine are clear, its general nature is no less manifest. It is a specialized piece of equipment, frequently specialized to a high degree.

If specialization is a term fraught with danger to the average printer, he should feel safer if he will but exercise the precaution of avoiding specializing in his customer's business and realize that specialization does not require size.

In amplifying the first admonition, let him realize that the business machine itself is a specialty designed for a particular job, and capable of doing little beyond that job. The typewriter, adding machine and mimeograph have been joined in this category by the small sheet-fed offset press.

It is in truth, a machine specifically designed for the business office and ideally suited to the production of short runs of printing. Ordinarily the printer should regard it as such. He may use it profitably as a piece of auxiliary equipment but, except under the most unusual circumstances, he would do well not to attempt to build a business on it.

Printer Should Specialize

If the printer hesitates to specialize because of his belief that successful specialization requires a large investment and grand scale operation, I can name a dozen or more specialty plants, all within a few miles of New York, which at their beginnings operated profitably on a gross annual volume of less than a quarter of a million dollars.

Some, chiefly because of their engaging in the production of a specialty, have grown far beyond that figure, others are still operating profitably within it. These companies include: a maker of plastic playing cards, a saddle-fold carbon business forms manufacturer, a maker of cardiograph charts, a manufacturer of bank forms, a printer of weekly newspapers, a manufacturer of four-color process advertising post cards, a producer of short-run three-color process offset printing, a bank check producer. The list could run on and on.

It is not size that has spelled suc-

cess for these and many others like them, but rather their ability to approach the business of printing from a new and somewhat unusual direction. They have studied the end product and then have gone about producing it by the best, and frequently newest methods.

The path of none, I believe, has been a smooth one. Frequently the sheriff has been but a few scant paces behind, frequently too, there must have occurred the suspicion that what was being attempted was impossible, for that is the lot of the *Vortrekker*.

There was always opposed to this, however, the comforting thought that a hurdle negotiated was still a hurdle in the path of those who followed, and the realization that if there were no problems, any idiot with sufficient capital could get in the business and make it tough indeed for those who went ahead.

Consider the problems of the first on our list, the playing card manufacturer. Playing cards resemble a pair of nylons in that the look from the front is much less important than that from the rear.

If you believe that your quality control problems are pretty difficult, consider the fact that one small speck of slitter dust on the back of a playing card results in a marked deck.

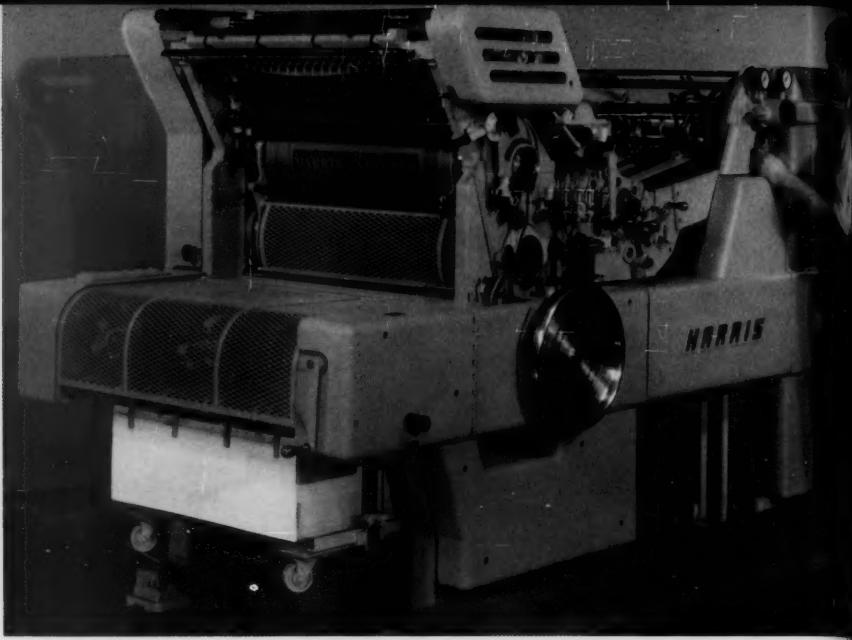
A sample mailing of four-color process work was sent out a few years ago to illustrate the beauty obtainable with a certain new brand of coated stock. It contained almost enough microscopic imperfections due to slitter dust that, had the job been playing cards, it would have caused the manufacturer to cut his throat.

Uses Dry Offset

Our playing card manufacturer went through the slitter dust and many other problems peculiar to his particular specialty. He found out, among other things, that the process best adapted to his work is dry offset. He has found out, also, that this is a pretty good method for other items, and has now branched out into a second specialty, moved into larger quarters and tripled his annual gross.

Our check printer, specializing in the imprinting of short runs, is using highly specialized presses for the

Now... a New Look for Harris presses... a light gray lacquer finish that's easy to clean and has better resistance to abrasion and chipping. Operating areas are brighter, too. This finish will soon be standard on presses 23 x 30" and smaller.



What's going on at HARRIS



Over Three Fourths of the multicolor high-speed magazine presses in this country have been built by Cottrell... another Harris-Intertype subsidiary. This double 5-color press is in Los Angeles... at Pacific Press, Inc.



The **Houston Post** and its radio-TV station KPRC are good customers of Harris-Intertype. At left is the Post's new Hi-Speed Intertype equipped with Dual Duty Quadder. Below is KPRC's 5 KW AM Broadcast Transmitter and Conelrad auxiliary, made by Gates Radio Company, a Harris-Intertype subsidiary.



THIS IS INTERTYPE



The First 3-Color Process page ever printed in a high school paper came off this Harris 17 1/2 x 22 1/2" offset press, owned by Midwest Printing and Lithographing Co., Fargo, N. D. It was printed for the Moorhead (Minnesota) High School.



An Oscilloscope takes the pulse of a Harris press in Harris-Seybold's Research Department. This electronic check on performance is part of a research program of measuring the precise behavior of presses in operation.

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HARRIS
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CORPORATION

work, but perhaps the secret of his success is the infinitesimally small office overhead required for a million dollar business.

Orders are received in duplicate, one, except for the imprint itself, being pretty much like another. One copy is put in the hold file, the other follows the work through the shop. There are no job tickets, no cost system, as such. Each month the banks are billed for the books made for their depositors. There are no collection problems, no waiting for O.K. of proofs.

If a general commercial printer with average office overhead should attempt to duplicate the work competitively, he would be in the red before the order got into the shop.

I hope that I have not given the impression that the printing of bank checks is one phase of printing without a headache. On the basis of having worked with most of the outstanding check manufacturers in the country, having been pretty close to this item from the time the stuff went into the beaters in the paper mill, until we went to the bank with the little slip of paper, sent to us in payment for our fee, let me assure you it is not.

Trends in Bank Checks

Functionally, a bank check can be about as simple a printing job as you could wish. If I were to tear a sheet of paper out of my memo book, place written directions thereon to my bank to pay a certain sum of money to your order, then, providing I had not been guilty of undue optimism regarding the state of my balance, the bank would be obliged to comply. The transaction would be just as legal as it would had I used a check printed on the fanciest paper ever conjured up by the most artistic imagination.

You can spend as much as you wish on a piece of printing to accomplish the same thing. You can print check paper so that when it is treated with ink eradicator, it will read, "void" or "altered" or, if you're so minded and not afraid of a libel suit, a list of more imaginative slogans, such as, "Shame on you!" or "Watch this guy. He's a crook."

How much all this is worth as a security measure, may be quickly and readily determined by checking with an insurance company, one of those unimaginative organizations which back their judgment with cash. Unless they have recently changed their collective opinion, they will tell you that from a security angle one check is pretty much like another and that the premium you pay them for insurance against loss through alteration is the same whether the safety paper is made by the wet or dry method, whether the check is pantographed or whether it is completely lacking in background pattern.

If the banks' loss through check alteration is so small as to approach the vanishing point, there are others incurred in the processing of checks which are real and substantial. One of these occurs in the sorting department, where the deciphering of signatures, written apparently by blind and palsied depositors in Sanscrit runs up clerical time and operating expense.

The imprinting of checks with the name of depositor has not only saved its cost, in many instances, in sorting, but has permitted the bank to make a charge for checks, which without the personalized printing would have been given away, so the bank as usual gains in both directions.

Magnetic Inks

The automatic processing of checks promises to effect further economies in bank operation, and although there remains much to be accomplished in perfecting methods, I believe that it is an eventuality upon which the printer may safely plan. The present thinking appears to be in terms of coding in magnetic ink, and using checks so imprinted in combination with means especially designed for use therewith.

A second method of processing is with optical identification equipment which will operate with either magnetic or non-magnetic inks. This type of equipment is manufactured by one United States firm and one in England. It has been in use for several years in the coding and processing of gasoline charge accounts, and

more recently by one New York bank in the coding and processing of its travelers checks. According to the manufacturers of the equipment, the optimum combination of ink and background is black ink on white paper, although pastel backgrounds have not been found to offer too much difficulty.

Whether magnetic or non-magnetic systems are used in the codification of bank checks, it appears likely that a white panel in the check's background may prove desirable to indicate the dimensional tolerances for coding, as well as to show the printer the area available for all non-coding imprinting. It is possible also that the bank adopting mechanical processing or automation will wish a check that indicates to the depositor that it has adopted the system, stamping it thus as an up-to-date member of the business community.

It should be noted that we do not predict that these things will come about, but we are sure that the probability is there and that the printer investing in equipment would be short-sighted in the extreme to ignore them, particularly if equipment can be obtained which will satisfactorily process either a continuous or non-continuous pattern on the check.

It would be reckless indeed to assume that any piece of printing as we know it today will, during the coming few decades, completely escape change. There are many reasons for this view, two of which are the trend towards elimination of hand labor now popularly known as "automation" and the concomitant trend towards color.

Tags and Labels

Let us consider for a moment such items as tags and labels which are now, for the most part, being affixed by hand. Picking up a die cut label, moistening it, and pressing it against an article of fibre or paper can be an expensive procedure, certainly one inviting analysis from a cost viewpoint.

In general, machines designed to replace such handwork operate better and faster with roll than with die

(Continued on Page 131)



"This gummed label job was
one short run after another —

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		POCATELLO, IDAHO Carpenter Paper Company	WASHINGTON, D. C. Whitaker Paper Company
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2.

Masking, Color Separation

for transparent and reflection copy

By John M. Lupo, Jr.

Technical Representative
Di-Noc Chemical Arts, Inc.

IN the first article, last month, we discussed some of the important theory, or fundamentals, of color, to help us understand the problems of color separation. We may consider that indirect color separation essentially is the separating of individual colors of the original copy, by reproducing them in tones of gray on a continuous tone panchromatic film or plate.

This continuous tone film we speak of is similar to the negative we get from an amateur camera. That is, it shows black (of the original) as a transparent area on the negative, while white of the original shows as black. The intermediate tones reproduce in varying densities on the negative, starting with a transparent area to a dense black. (Rather than an image composed of dots varying in size, as in a halftone).

The thing we are concerned with primarily in separation work is the control of these continuous tone negatives so that they will reproduce on a printing plate the dot values necessary for a good reproduction. It's quite difficult, if not impossible, to look at a printed halftone and tell the type of screen used for making the halftone, and the dot value in a specific area. It's even more difficult when starting in color to try to interpret a continuous tone negative. This may seem like an insurmountable problem but fortunately, it is not. For example, a magnifier will easily tell the trained eye the dot value in a given area, and experience will enable a good guess as to the screen ruling. With a densitometer, in fact, correct evaluation of a continuous tone negative is simple.

The densitometer is the basic instrument of control in color separation. It will not make good separations or masks for you, but it will tell you, with proper evaluation, whether a mask or separation is good or not.

There are certain terms used in working with a densitometer which are very important. Let's pause in our discussion to illustrate them in some detail.

Transparency

TRANSPARENCY, is simply a measurement of the amount of light coming through a material. (Do not confuse this with the term color transparency.) Technically, we can define this as the ratio of the amount of light *passing through* the material as compared to the amount of light *falling on* the material. In Figure 1, we see that there are 100 units of light falling on the negative and only 10 units of light coming through the film on the opposite side. Then by comparison:

$\frac{10}{100}$ (light coming through)

100 (light falling on)

we get: $1/10$ or 10 per cent.

Transparency usually is expressed in percentage, although you may see fractions used in some cases. A very

clear glass has a transparency of, let us say, 100 per cent, while something like a frosted or opal glass is much less transparent.

Opacity

In the example above we measured the amount of light going *through* the negative. The measurement of the amount of light being *held back* is what we call *opacity*. For example, we said that 10 units of light had gone through the film and, consequently, 90 units of light were held back. Opacities are expressed in whole numbers. They are found by simply reversing the fraction of the transparency. As an illustration, we said above that the transparency of Figure 1 is $1/10$ th. By reversing this we get $10/1$ or 10. This is the opacity.

Density

One of the most common terms used in photography is **DENSITY**. We generally refer to it as meaning the *blackness* of a photo image. More exactly, density is a *mathematical expression of opacity*. For example, in a common line shot on litho film, we get opacities of 10,000 to as high as 100,000. Working with these large numbers for the plotting of density curves is not practical so we express opacity in smaller numbers which we call logarithms.

A logarithm is a mathematical term which we can explain as follows: Suppose we start by taking three numbers, 10, 100 and 1,000. We can say that 10 equals 10×1 , 100 equals 10×10 , and 1,000 equals $10 \times 10 \times 10$, and the logarithms of these numbers are 1, 2 and 3 respectively. A logarithm of a number is nothing more than the number of times 10 must be multiplied by itself to yield that number. We have to multiply 10



Figure 1. Notice that there are 100 units of light shining on the film, and only 10 units of light coming through on the opposite side.

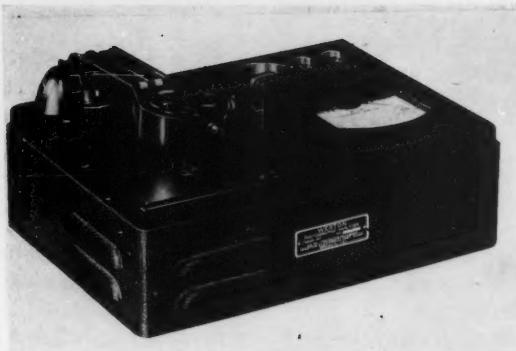


Figure 2. Weston Photographic Analyzer Model 877, (left) manufactured by Weston Electrical Instrument Corp., Newark 5, N. J. Direct reading electric type densitometer. Density from .02 to 3.0. Can also be used as a photometer with a meter candle range of 0 to 650. This cannot be used for reflection density readings. Furnished with 24-page instruction booklet. Figure 3.



Photovolt Densitometer (right) manufactured by Photovolt Corp., New York City. An extremely accurate direct reading densitometer which has as accessories a reflection head for reflection density readings and a photometer unit. Photo shows transmission head on left and main unit on right. Furnished with elaborately detailed instruction book.

just one time to get 10. Its log (short term for logarithm) is 1. It is easy to see that by using logs we can reduce these large opacity figures to much smaller, more manageable ones.

Densitometer

The instrument used for measurement of density is called a DENSITOMETER. The densitometer does a lot more than measure just one type of density, for it can be used to measure both transmission and reflection densities. In addition, some densitometers can be used as photometers. Let us explain each of these functions in some detail.

In measuring the density of a negative or a transparency, we actually are measuring the amount of

light which the negative itself holds back when light shines through the material. We call this *transmitted density*, for light is transmitted through the material. Transmission densities are used in describing all negatives and positives on film or glass plates.

The *reflection density* of a material is a measurement of the reflecting density of an opaque print. This is best illustrated by a subject such as an oil painting. We can easily read the transmission density of a color transparency. With a reflection densitometer we can just as easily measure the density of an opaque print.

Most densitometers can also be used as a photometer; which measures what we might say is the *quantity*

of light. Just as a scale will tell you the weight of a material, the photometer tells you the amount of, or quantity, of the light source. It is useful in exposure determination for contact, camera and enlarger use.

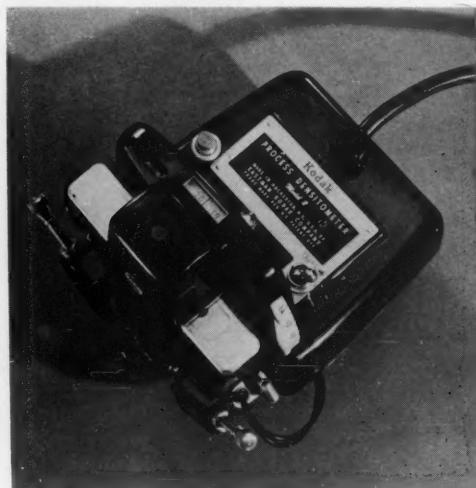
We have listed in Figures 2, 3, 4 and 5 some of the more popular densitometers used in the graphic arts field, together with notations pertaining to their characteristics. If you are just starting in color I would highly recommend that you get a densitometer before anything else, for it will start you on the right road and save you a lot of anguish and money later on.

Density Range

One of the problems in color litho-

Figure 4. Kodak Process densitometer manufactured by Eastman Kodak Co., Rochester, N. Y. This is an electric comparator type densitometer which is also adaptable for reflection densities and for use as a photometer. Density readings to 3.0. Model

shown is equipped with reflection head. Figure 5. Densiechron Densitometer manufactured by the W. M. Welch Scientific Co., Chicago. This is a direct reading densitometer with attachments for transmission, reflection and photometer readings.



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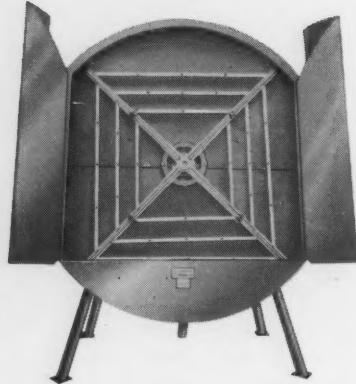
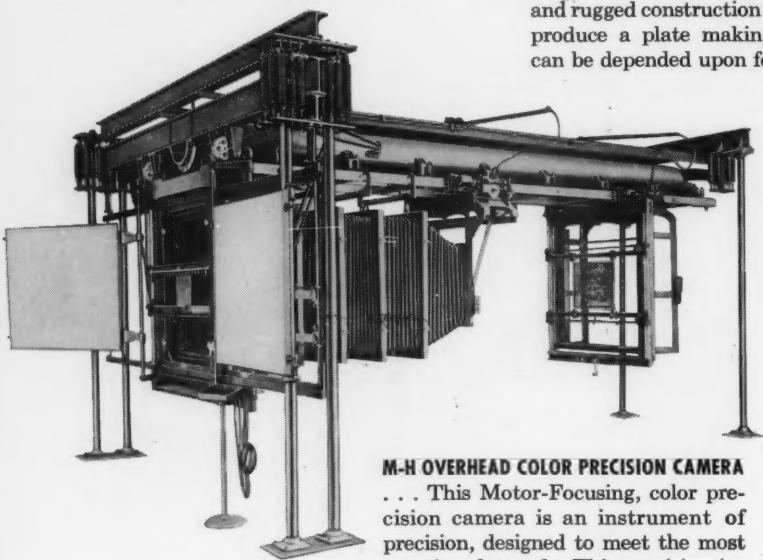


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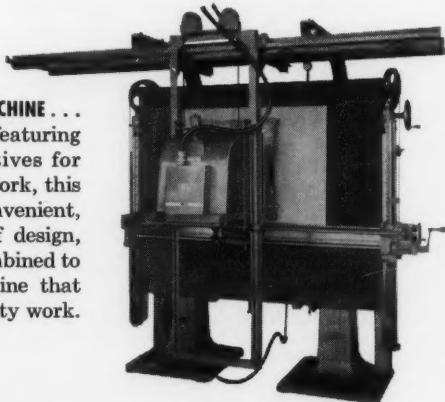
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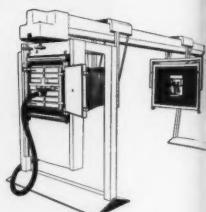


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For top quality plate making featuring precision in registering negatives for single as well as color process work, this equipment is unmatched. Convenient, simple operation, simplicity of design, and rugged construction are combined to produce a plate making machine that can be depended upon for quality work.



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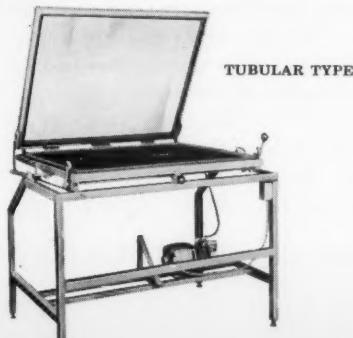
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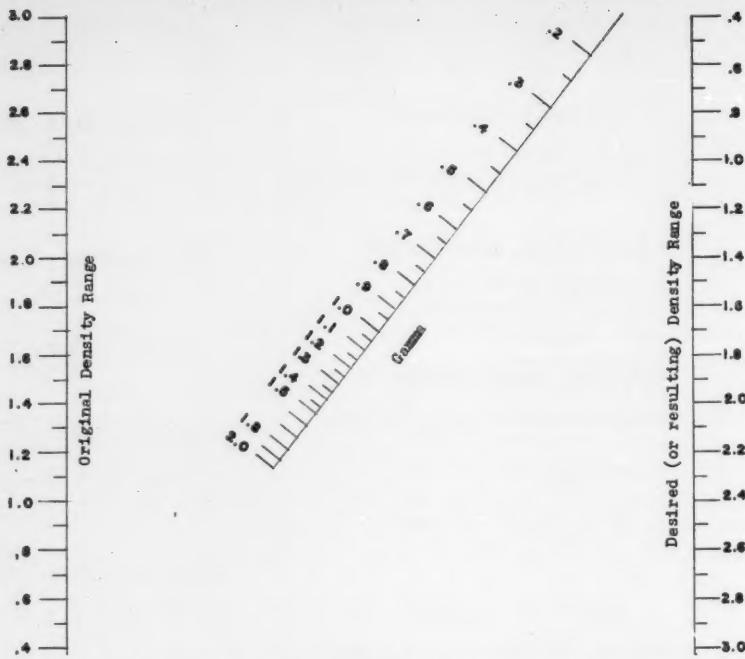


Figure 6. Gamma Chart. With a straight edge, align the original density range on the left scale, with the desired (or resulting) density range on the right scale. Read the gamma on the oblique center line.

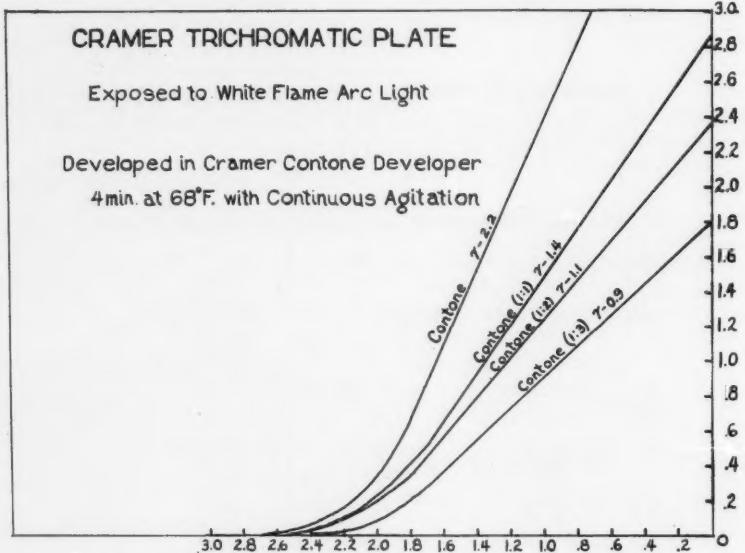


Figure 7. Cramer Trichromatic Plate Gamma chart.

graphy (as in any printing process) is the inability to reproduce the complete tonal range found in the original art work or transparency. So, a compromise must be made.

We know from black and white halftone work that a halftone screen is capable of photographing a certain contrast (or range) of copy. If the copy is too contrasty, we must flash

the film to get a dot in the shadows. On low contrast copy a flash generally is not necessary. We may say from this that the halftone screen is capable of reproducing only a limited tonal range (or contrast) of gray. For litho work with a 133 line magenta screen a reflection density of approximately 1.2, is about what the average litho film will reproduce.

This means that a magenta screen will satisfactorily reproduce a copy without a flash that has a tonal range of 1.2. When shooting with continuous tone negatives, to make halftone positives, this density range is approximately 1.3.

Now what does all this mean? Well, we can say that the final separation negatives should be in a range of approximately 1.3, but let us explain this term "density range" a little further.

DENSITY RANGE means the difference in density between the lightest and darkest areas of the original copy or film. For example, if we were to take a transparency and measure the lightest areas as .3 density and the darkest as 2.3, the density range (the difference between the two) would be 2.0. This range of 2.0 for a transparency is not really high. Many transparencies will have a range of about 2.3.

You can see from this that with a transparency we have a very contrasty type of copy, and this high density range must be reduced to about 1.3 in the final separations so that we can make halftone positives which will have proper dot values in the corresponding gray values of the continuous tone negatives.

If you aren't confused now you never will be, so let's explain it in another way. The density range of the original transparency generally is above that which we can reproduce with a halftone screen, consequently when we make continuous tone separations they should be, after the masking procedure, within the range that will give us a suitable halftone. The density range to accomplish this is 1.3. The final separations, then, should have a density range of 1.3. (This is just an approximate figure and will be clarified later on). The term density range is quite important in color work for it is the key to calculating the necessary mask strengths, and also tells us, to some degree, the developing time of masks and separations. Here is how it is done.

Gamma

Suppose you were to take a halftone negative with a range of a 10 per cent tone to a 90 per cent tone, make

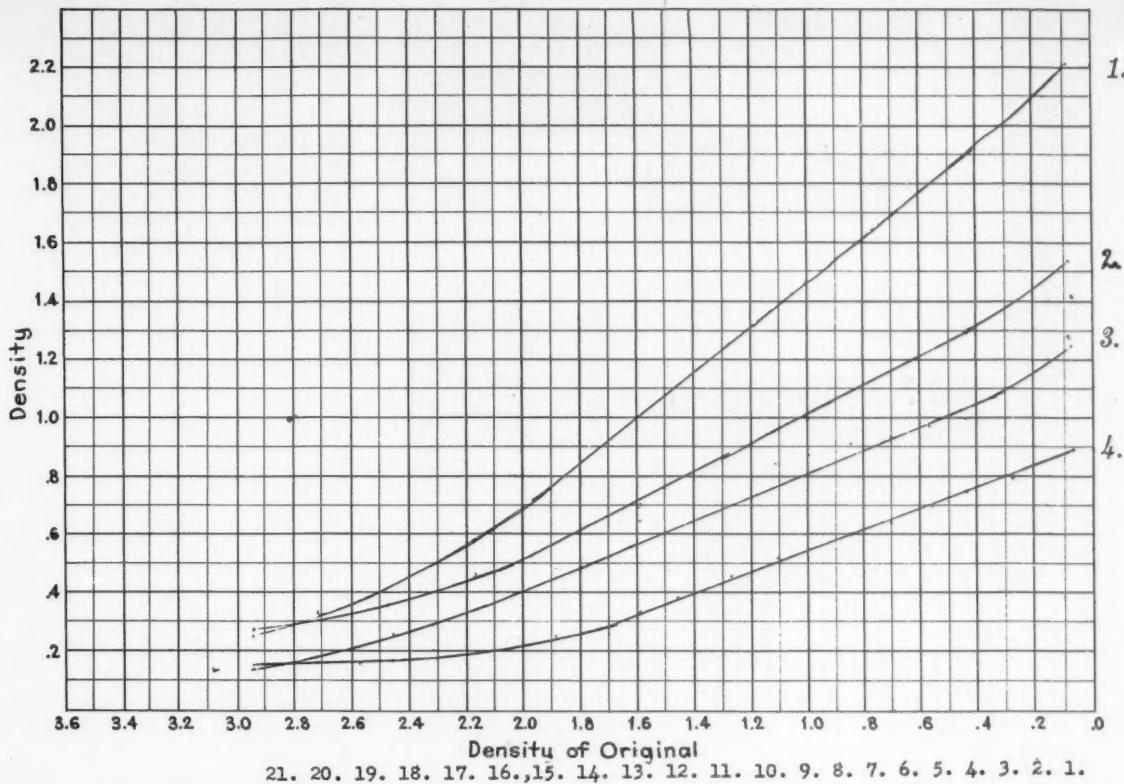


Figure 9. Curves showing gamma: Test No. 1, 10 sec. exposure, DR .73, gamma .25; Test No. 2, 19 sec. exposure, DR 1.10, gamma .38; Test No. 3 10 sec exposure, DR 1.28, gamma .44, Test No. 4, 5 sec. exposure, DR 1.94, gamma .67. Numbers at bottom of illustration refer to step numbers of LTF Scale. They are positioned to simplify reading the resulting density as opposed to the LTF original density reading. (NOTE: We found gamma

of the resulting negative, by dividing the density range into the original density range. Actually, gamma is a measurement of the slope of the straight line portion of the curve, and since this curve has a slight rounded portion, this formula for finding gamma of the resulting negative, is not entirely correct. However, the results are well within the accuracy needed for separation. More information will be given on this in future articles.)

a contact of it so that you get in the 10 per cent area of the negative a 90 per cent on the contact positive, and a 10 per cent dot on the positive in the 90 per cent area of the negative. You have then reproduced on the contact positive the exact opposite of the negative. On the negative you had 10 per cent to 90 per cent. The positive gave you 90 per cent to 10 per cent. You have perfectly reproduced the contrast of the original. Suppose, though, that you underdeveloped another positive and you did not get the same contrast but a much lower contrast, for instance, a contrast of 50 per cent to 5 per cent. This would get quite confusing, because we have no exact way of measurement or expressing contrast. When working with continuous tone materials we describe contrast by *comparing the density range of the origi-*

nal to the density range of the result we get. This resulting figure is called GAMMA.

Let's look at it in another way. Suppose we say that we have a density range on a transparency of 2.0, with a low of .3 and a high of 2.3. If, by connecting this transparency on pan film, we get the exact opposite, with a density range of 2.0, we say that we have a gamma of 1. How do you do it? Quite simple. Divide the original density range (2.0) into the resulting density range of the contact (which is also 2.0) and the answer is 1. REMEMBER: *divide original density range into the desired (or final) density range.*

Figure 6 illustrates a convenient way for finding gamma by using a chart. This is quite handy and it is suggested that you use this instead of figuring out gamma by arithmetic.

Well now that we know what gamma is, what use can it be to us in color? When working with photo materials of any type there are two things that you must know: (1) the proper exposure, and (2) the proper developing time. One without the other is no good. A poor exposure with the recommended manufacturer's developing time will not yield a negative suitable for color work, and vice versa.

In order to explain the workings of their photo products, film manufacturers furnish a film data sheet which tells you the gamma you can or should get with a certain developing time. Now this is quite a help, for if we know what gamma we want for a mask or a separation negative, we can check the manufacturer's instructions and get the correct developing time. This solves half of our

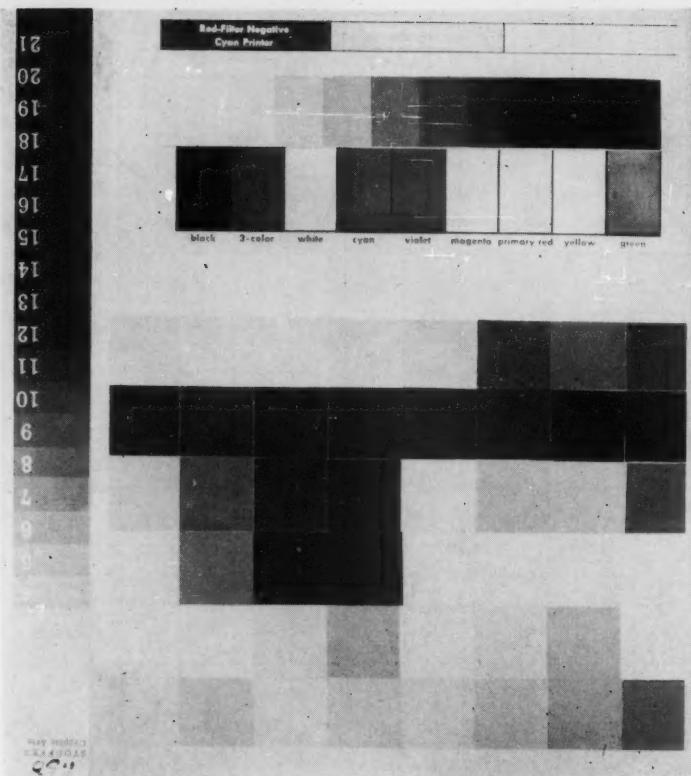


Figure 10. Red Filter Separation. Positive Print. Filter: F (No. 29) Exposure time: Contact for 5 seconds. Tap No. 2 KM Light. Developing Time: DK 50 (1:1) at 68 degrees with constant agitation. Material used: Cramer Trichromatic Plate. Density Readings: Original .35 to 2.35, Density Range 2.00. Resulting negative read in steps nos. 3 and 16 of LTF Scale, .52, to 1.85, Density Range 1.32. Resulting gamma .66. Illumination: General Electric Exposure reading of 10 with hood off. Reading taken at base of contact frame, with no filter.

problem, and the only other thing to find out is the correct exposure time. But before we get into exposure, let us elaborate on this gamma relationship to developing time.

In Fig. 7 the curves show that on Cramer Trichromatic Plate, exposed to carbon arcs, and developed for four minutes in Cramer Contone developer (equivalent to Kodak DK 50), we can get a gamma of .9 to 2.2 by varying the dilution of developer (γ is the symbol for gamma). Suppose then that our transparency has a density range of 1.44 (low of .3 and high of 1.74). We know that we want to end up with a density range of 1.3 in our separations, so that we can reproduce the continuous tone negatives with appropriate values. To find gamma then, we divide the original density range into the desired density range, of

$$\frac{1.3}{1.44} = .9$$

As we can see, the gamma we want is .9. Checking the chart in Figure 7, we find that the correct developing time for this gamma is four minutes with a developing dilution of 1:3 in Contone. In developer dilutions, the first figure refers to the

Reprints

If interest warrants, reprints of this series will be available upon its conclusion later in the year. Cost will be about \$2. Readers may reserve a copy by writing editor at Box 31, Caldwell, N. J., and mentioning "Lupo No. 2." (Send no money now). Reprints of Mr. Lupo's earlier series "Three-Color Direct Separation," still are available from the editor at \$1 a copy. (Specify "Lupo No. 1.")

developer and the second figure to the amount of water, e.g. 1:3 means one part of developer to three parts of water.

If you are not familiar with continuous tone materials, I know that density range, gamma, dilution, etc. will at first seem quite confusing. However, we will explain these points in more detail in other articles, so if you do not fully understand them now, the meaning will come to you later on. The important points to remember are these:

1. **DENSITY RANGE** is the difference in density (either transmission or reflection density) between the lightest and darkest tones of the original copy.

2. **GAMMA** is a measure of the contrast of the original to the resulting negative (or positive). To find gamma of a negative, you divide the original density range of the copy into the resulting density range of the developed negative. A simpler way to find gamma is to use the chart in Figure 6.

3. In exposing photo materials we have to know both exposure and developing time. Gamma tells you the developing time, by checking the desired gamma against the manufacturer's film data sheet.

4. Do not confuse density range with gamma. Density range is the difference in density between the light and dark areas of the original, while gamma is a *comparison* of density ranges; that is, a comparison of the *original* density range to the *resulting* density range of the negative.

Equipment for Color

Equipment for color work is quite a difficult point to cover inasmuch as the type and amount of equipment necessary will be governed mainly by what you now have, and what type of color work you are going to do. Assuming that you have a workable darkroom (sink, trays, safelights, etc.) and a camera, the important things that you will need are:

1. **A DENSITOMETER.** The type you will get will depend mainly on your budget limitations. In price those illustrated start at approximately \$75,

(Continued on Page 122)

does your company find management problems alone



when it could use the "know-how" of more than 1000 NAPL members?

Since 1933, when it was founded, the NAPL has grown to a membership of more than 1000. The association has but one purpose: *to provide its members with the tools of better management . . . and greater profit.*

NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS 317 West 45th Street, New York 36, N.Y.

We hereby make application for enrollment as an Active (Associate) Member in The National Association of Photo-Lithographers, and if elected, agree to abide by its By-Laws and support its objects and interest as far as our time and ability will permit.

We enclose herewith \$..... as our first year's dues.

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	Presses larger than 35" x 45" . . . \$47.00 per press per year \$		
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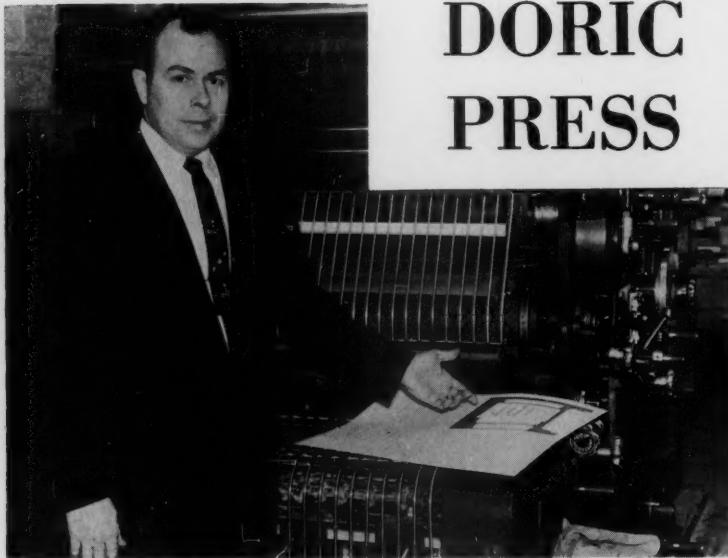
Today the lithographic industry is leaping ahead with giant strides. And with this progress, management problems have become increasingly complex. Yet there is no need to work alone in seeking a solution to those problems. The experiences of fellow lithographers in the NAPL *may already have solved the problems for you.*

JOIN NOW! You can find the solution to many of your management problems and make your business prosper through membership in the NAPL — *"The link that leads the lithographer to greater profits."*

Send in this application form today.

Accent on youth, promotion pays off at

DORIC PRESS



Eugene Leone, youthful partner at Doric Press, describes facilities to ML.

TWENTY-FIVE YEARS AGO this month, Malcolm Hoile of Verona, N. J., bought a few reams of paper and started turning out small jobs on a hand press in his cellar.

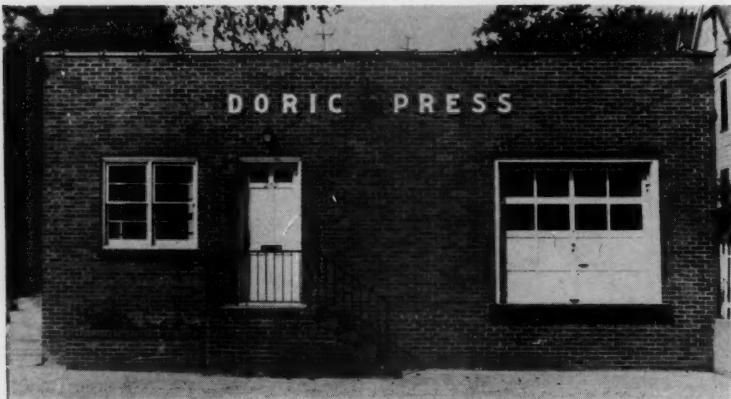
Today he buys his paper in five- and ten-ton lots to keep up with the flow of orders that come into the descendant of that basement hobby, a modern one-story litho shop on the main street of Verona. Multicolored runs of 50,000 or more represent typical jobs.

Mr. Hoile's company, Doric Press, grew steadily through the depression

years and the forties, but three specific years stand out as milestones in its remarkable growth: 1946, when Eugene Leone joined the firm as a partner; 1947, when the owners realized the potentialities of offset and purchased their first offset press, a model 40 Multilith; and 1954 when they moved into a new building and replaced all their equipment.

Doric Press is located on Bloomfield Ave. in the city of about 10,000, near several rapidly-growing industrial communities. The shop contains 2,500 sq. ft. in a one-story structure

Front view of Doric's new building on Bloomfield Ave., Verona, N. J.



on a 35 x 100' plot. The plant is air-conditioned, has humidity control and contains three offset presses, a Multilith and a small letterpress, all purchased within the past three years. Most of the company's business comes from the surrounding 20-mile area.

An interesting factor which might point to one of the reasons for the success of Doric Press within the last few years is that the average age of the pressmen is about 33; and the foreman, Walter Garde, is one of the most enthusiastic and best informed printers ML has ever met.

Mr. Garde, a graduate of the trade school at Pressman's Home, Tenn., has been in printing since he was 15. Judging by his conversation with ML staff members during a recent visit to the shop, it would seem that he devotes every waking hour to his craft. He is on the board of governors of the Newark Craftsmen's Club, a former printing instructor at Newark Vocational School, a frequent student when special courses are given in the area, and an inveterate traveler who doesn't hesitate to journey across the country to view a new press or an interesting graphic arts development.

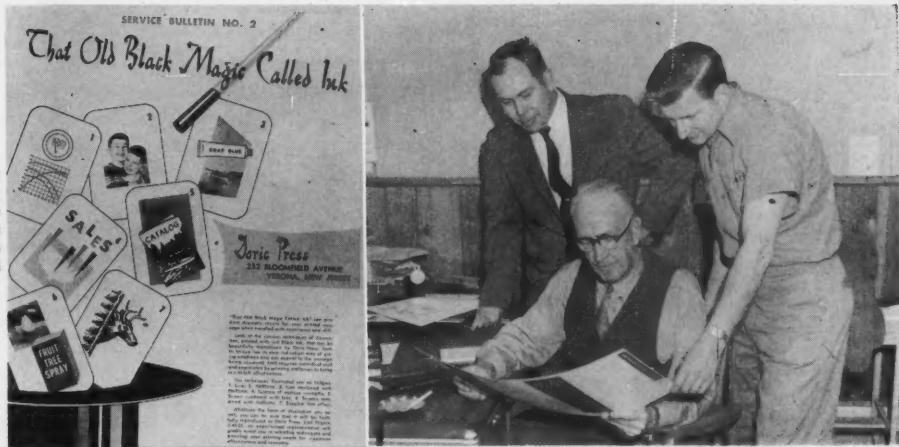
His crew is comprised of James Dioszeghy and I. S. Polizzi, both graduates of the Manhattan School of Printing in New York, and Peter Lawton and Lawrence Bauries. The latter two were trained in the plant. All have been with Doric fewer than four years.

Doric Press is equipped with two 23 x 30" ATF Super Chiefs, one 17 x 22" ATF Webendorfer, one Multilith, one 10 x 15" Heidelberg, one 17 x 22" folder, a gang stitcher, and complete platemaking and bindery equipment. The plant uses 3M pre-sensitized plates exclusively. Because of frequent copy changes, however, the firm has found it impractical to store plates and keeps only the negatives.

At present camera work is farmed out to trade shops. An artist is associated with them in the preparation of advertising campaigns for customers. For the future the company looks to complete in-plant service.

Approximately 80 percent of the work is two-color and concentrated in

(left) Second mailing piece in series. (right) Doric officers Eugene Leone (left) and Malcolm Hoile (seated) discuss production problem with foreman Walter Garde.



the quality-conscious ethical drug field; including brochures, pamphlets, technical bulletins, catalogs, labels and the like. Mr. Hoile estimates that his business has doubled in the past three years. If this trend continues, the plant will be expanded on available land adjacent to the shop.

Much of the growth of Doric can be attributed to an original self-advertising campaign started recently by Mr. Leone. When he joined the firm he ran the shop, but as business increased more and more of his time was being spent in sales and as a result last year Mr. Garde was hired and Mr. Leone moved outside to concentrate on sales.

Mr. Leone's campaign features a series of clever bulletins which explain the various uses of printing and Doric's ability to produce quality work.

For instance, the second bulletin, entitled, "That Old Black Magic Called Ink," explains the various techniques of illustration which involve only black ink. The techniques are illustrated with the reminder that Doric Press can achieve "similar dramatic results" for the potential customer's printed message. The examples in the bulletin include line, halftone, line combined with halftone, screens of various percentages, screens combined with line, screens combined with halftone and stippled line effect.

These bulletins keep the name of Doric Press, Mr. Leone explained, before the potential customer without seeming to pressure him. The low-

pressure pitch starts with several of the "service bulletins." Then an announcement introducing Mr. Leone and announcing that he will be in the area and available for consultation is mailed. After the personal call a thank you is sent. This is followed by additional service bulletins and other advertising pieces. Mr. Leone designed most of the advertising material and did the photography himself, working in collaboration with the staff artist.

Another interesting aspect of Doric Press is that it is not afraid to experiment with new materials and techniques. The plant has non-glare lights and the presses have breakers instead of fuses, static eliminators, dry sprays, Baldwin Water Levels, paper dampeners and other modern aids.

To illustrate the point further, Mr. Garde dug into the company files to

show ML some experimental printing pieces, several of which were quite effective examples of the imaginative use of the lithographic process.

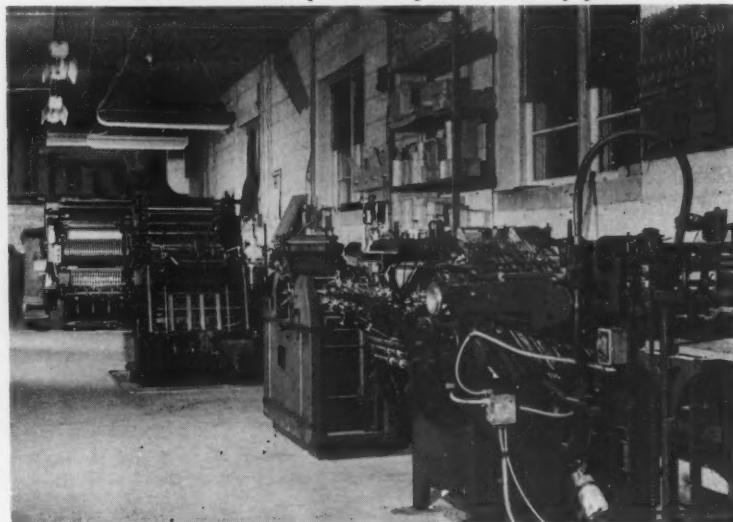
At the time of ML's visit, Mr. Hoile was cleaning up his desk work in preparation for a visit to Drupa and the Brussels World's Fair to investigate new graphic arts equipment and techniques.

Doric Press is an open shop and provides many benefits for its workers including insurance and uniforms in addition to the standard two-week vacations and paid holidays.

One point of pride to the seven-man firm is two awards for craftsmanship from the Hamilton Paper Co. Certificates were awarded for two portfolios printed on Hamilton Andorra for the Schering Corp. Much

(Continued on Page 133)

A view inside the Doric plant showing modern offset equipment.



**Do away with
'crystal ball'
management and**

Make a Fair Profit

By **John B. Osborn**
Forbes Lithograph Mfg. Co., Boston



IF WE go back over the past 10 years, we can't help but be impressed with the tremendous strides made in the lithographic process. It has been stated that it has advanced considerably more than the other processes. We have seen tremendous advances in

- Photo-composing equipment
- The deep-etch method of plate making
- The dot-etch method of color correction
- More exacting half-tone reproduction
- Larger and speedier multi-color presses
- Web-fed presses
- Long life bi-metallic plates
- Presensitized plates
- Better inks and special papers
- Color scanners

There have been many other improvements. To prove this, all that is necessary is to compare lithographic reproduction today with what it was 10 years ago. But, in such a comparison, one must look at and consider the time and cost elements, as well as the use and number of colors.

Now, what about the future? We know that our population is increasing at a yearly rate of better than three million. We read much about the emphasis being given to research and development programs, particularly in the large industrial companies. A well-known consultant has predicted that in the next 10 years close to \$100 billion will be spent for research development; also, that our gross national product will increase to approximately \$600 billion. (I believe it is now somewhere around \$430 billion.) All this is sure to lead to many new products, as well as many improvements in existing products, which, in turn, means business for the lithographer and printer.

Several months ago there appeared in the *Boston Sunday Herald* some predictions made by a group of eight top scientists, who assembled at the Waldorf Astoria for a symposium on the next hundred years:

"Your eight-hour work week be-

From a talk presented at the 53rd annual convention, Lithographers National Association Convention, Phoenix, April 28-May 1, 1958.

hind you, the sex and number of your expected youngsters conveniently selected, and your innards full of good, nourishing, synthetic food, you take off by space ship for a vacation at an excursion hotel on the moon, or maybe you plan to stake out a moon claim and do a little mining. While en route you pass the time away with a little mind conversation with your companion."

From this article, I further quote: "Automation will eliminate the difference between skilled and unskilled workers, and the work week will drop to eight, or even four, hours. Aged and ailing persons will be able to replace diseased or damaged organs from a spare-parts bank."

To most of us, this sounds completely wacky, but suppose we had read a hundred years ago about those things that have happened in the last hundred years. Would we not have thought the same thing?

Our economy is sound and will continue to grow in the future, as it has in the past. In fact, it is prophesied that the next decade will produce more new products and wonders than in the past decade. Also, let us not overlook the research plane of our suppliers and our various technical associations. These programs will surely lead to sheet-fed presses that will be even more efficient, more accurate and faster. Also, web-fed presses will develop to a point where present difficulties and limitations will be pretty much eliminated.

Other Improvements

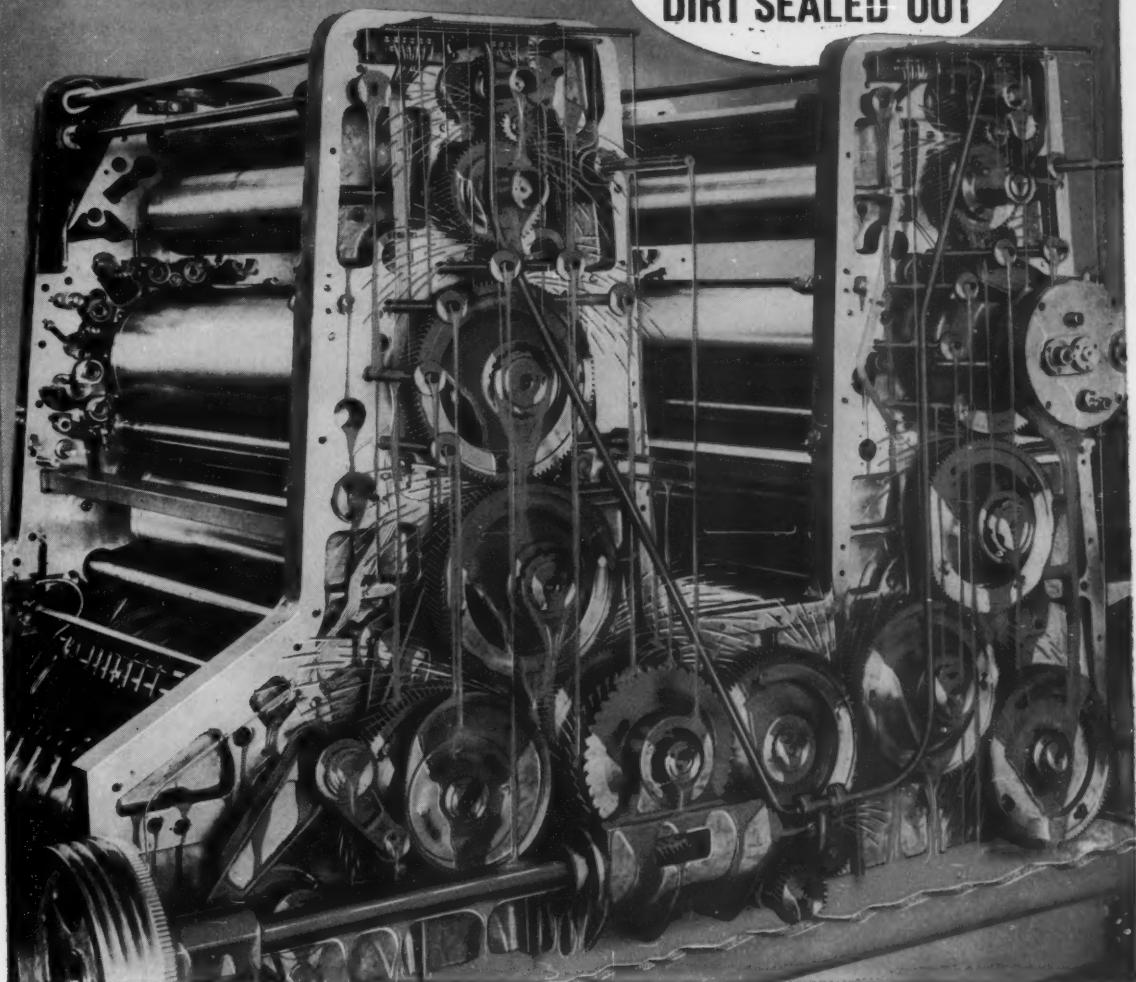
Paper will continue to improve, and we can expect not only greater stability, but, in general, far better results. Ink will be greatly improved. Techniques involving color separations, platemaking, etc., are already on their way to showing vast improvements in the next few years. This leads me to the most important part of my subject and is one of great concern to me, as it should be to you and to the graphic arts industry in general, and that is profits . . . or rather, lack of profits, which is due to too much crystal-ball management.

Poor Profit Picture

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about the profit picture of our industry, I think you will agree that it is not a very pretty one. It is considerably lower than the profit figures as shown this past year for both durable and non-durable goods and considerably lower than the figures as reported for total manufacturing. In fact, the profit figures for our industry fall in the same general range as those reported by the food industry. I mention food only because it is known to all of us to be an extremely low-profit industry.

It might be of interest to you to know that companies manufacturing printing presses, machines and equipment used in our industry showed last year a profit after taxes of better than 7 percent. Even though this looks good to us from our position, I can tell you that, from conversations I have had over the past several months with prominent officials of this particular industry, they state very frankly that this figure is not anywhere near as great as it should be, considering the amount of research and development work necessary to benefit properly the printing, lithographing and bindery industries.

This statement raises a very serious question in our industry. Where are we going to get the necessary money to conduct our own research and development programs?

On a further check with some of our other suppliers, I find that those manufacturing printing inks showed a profit after taxes last year of around 5 percent; paper manufacturers, approximately 7 percent.

We are all aware of what has happened to lithographic profits over the past 10 years. The downward trend is very serious and, if allowed to continue, will lead to disaster and put lithographers and printers out of business.

This, of course, sounds ridiculous and is, but let's ask why this has been allowed to happen. Our industry is caught in a squeeze. During the last several years, we have seen increases ranging from 40 to 50 percent, and even higher in the categories of machinery and equipment, paper, board, ink, labor, transportation,

packing materials, etc., all of which are the tools with which we work. Other items which have gone up in the same proportion, of course, have been taxes, utilities, and a myriad of other items, all of which are contributing to this squeeze. And yet the industry is loathe to do anything about pricing the product so as to allow a fair profit. This type of action and thinking is responsible for the frightening profit declines. It is really terrifying when you think that this has taken place during one of the greatest booms our economy has ever experienced.

Let's ask ourselves who is to blame for this unhealthy trend. If we are honest, I think you will agree the finger points directly at management, which is apparently lacking in positive leadership.

The lithographic and printing industry is an old and exacting one, and those of us who are associated with it can and should be proud of it. We should hold our heads high and have the courage of our convictions. Our product is a very basic and essential one, and our industry is most certainly entitled to a fair profit—entitled to a profit just as much as any other industry, perhaps more so when you consider the extremely large investment that we have to have in equipment and skilled personnel. How many industries do we know of that have to have such a comparable structure in order to conduct business, and of the few that there are, how many of them find themselves in the serious situation of declining profits? Few, if any.

Effect of Recession

We are all very much aware and concerned with what has happened to our economy over the past few months. This so-called recession that we are in has, from the information I have been able to get, meant a decline of from 10 to 20 percent in our business. If this recession should continue for too long a time or develop into something worse, I hesitate to think what will happen to an industry such as ours whose break-even point is so high. It could spell disaster for a great many.

It is time that the industry realizes the seriousness of this situation, and it must take corrective steps at once.

Basically, it seems there are two general elements to be considered in order to realize a fair profit: cost of goods and price received for goods.

Let us first take the cost of goods. Perhaps another way of stating it would be to take the cost of goods up to the point of the application of profit.

There are three categories to be considered here. The first category to include paper, or stock, ink and whatever other materials are required, plus the labor to put these items together into a salable product. These are pretty much stable, as material is purchased at market prices and labor rates are pretty much uniform in the various graphic arts centers.

The second category would include supervision, indirect labor, rent, heat, light, taxes, insurance, depreciation, etc.; or, in general those items which are included in factory overhead.

The third category would include those items, such as cost of selling, administrative expenses and general management, plus any overall plans for expansion, research and development.

It is in the categories of factory overhead and selling and administrative expenses where individual skill and efficiency play an important part. It is also in these two categories that all items must be constantly analyzed, supervised, and controlled if the graphic arts industry is to correct its profit structure, and, of course, it is the area where selling prices are established. Those who do not know these costs and do not attempt to control them, hurt not only themselves but the whole industry as well.

If we now take the second element, the selling price of goods manufactured, we have an area in which the greatest abuse exists. The industry must stop the vicious practice of price cutting, and I am sorry to say that most all members are guilty.

Some years ago I remember a situation in which a lithographer had been asked to quote on a rather large

(Continued on Page 125)

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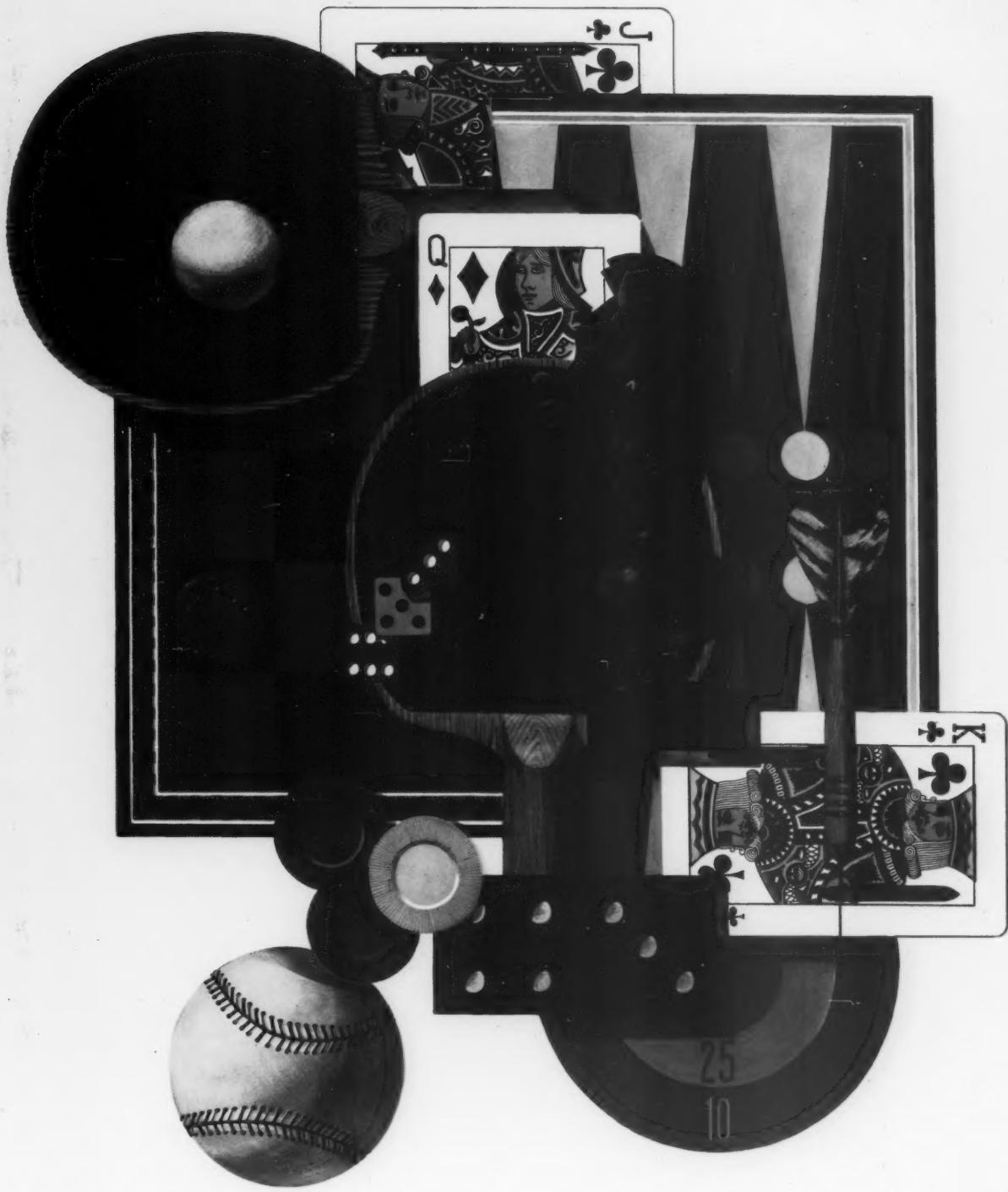
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PRINTING PAPERS FOR BOOKS, MAGAZINES, COMMERCIAL PRINTING, BUSINESS FORMS AND PACKAGING

PAPER

for web offset

By *Kenneth L. Wallace*

Kimberly-Clark Corp.

WEB-offset is recognized by the paper industry as a segment of the printing industry that is showing rapid growth and a tremendous potential for future growth.

While not a new concept in printing, it was not until just a few years ago that the process gained much attention outside the forms printing field. It is now carving for itself a very definite place in the graphic arts field.

Its most rapid growth to date has been in the field of magazine publication, newspaper, encyclopedia, directory, catalogs, mailers and so forth, and more recently has been competing against high quality sheet printing of long run commercial jobs, and I may add, producing printing of equal quality.

To give some idea of the growth of this segment of the printing industry, let me quote from a survey of the industry. There are in excess of 100 printers actively engaged in or contemplating expansion into heat set web-offset printing. This number appears small compared to the thousands of printing plants in the country, but when one considers how much paper one of these presses can consume on a one-shift basis per year, they become a significant part of the printing industry. Their use of coated paper alone is estimated to be in excess of 50,000 tons per year. The total tonnage used is much greater than this as the bulk of work on web-offset still is on uncoated type paper.

With this sort of tonnage, coupled

From a talk presented at the 53rd annual convention, Lithographers National Association, Phoenix, April 28-May 1.



Kenneth L. Wallace

with growth potential, lithographers may be sure that the paper industry is aware of and actively engaged in ways and means of developing and supplying the needs.

There is a fairly wide range of papers used on web-offset presses, including coated and uncoated book, groundwood and free sheet, glossy and dull finish and newsprint. Some lithographers are experimenting with films and foils.

In their expansion into the publication and job printing field the web-offset pioneers faced quite a number of problems. Much credit for the growth of web offset is due these pioneers who persisted in the face of great obstacles and considerable research cost in time and money. The process still presents many problems which will require the close cooperation of printer, equipment manufacturer, paper manufacturer and ink supplier for their solution.

Paper, being a very important medium of reproducing the printed

word, quite naturally shared in the problems and successes of web-offset.

In discussing papers for web-offset, I think it will clarify the picture if reference is made to competing printing processes.

Qualities for Web Offset

One area where web-offset has shown rapid growth is in the short run publication field using relatively light weight papers. Here I think we have to concede that the web-offset process by its very nature demands more of paper. It requires that more special features be built into it. Here are a few of the reasons:

1. Because of high web tension and intimate contact of blanket to paper, the requirements on sheet strength are more critical. One has but to stand next to a web-offset press at high speed and observe the printed web leaving the nip to appreciate the stresses to which it is exposed. Because of the added stress on the paper, more fiber to fiber bonding, and in the case of a coated sheet, more coating to fiber bonding is required.

2. Because the process uses a water and ink combination, some degree of water resistance is required to prevent emulsification of coating and subsequent piling on the blankets. The degree of water resistance of coated papers is less for papers designed for web-offset than for those designed for sheet-offset. The two reasons for this appear to be a smaller plate gap and higher speed, the latter providing less dwell time between units.

3. By comparison with papers for letterpress, the paper must be more free from surface dust, lint, loose fiber, or what is commonly called "hickies."

It seems all offset blankets are equipped with radar to search out and gather up each loose particle on the paper surface. Special precautions are taken in the manufacturing and converting operations to minimize the danger of loose particles getting onto the surface. Coating formulations have to be watched more carefully as to make-up and application.

4. The condition of rolls supplied to press is more critical for web-offset than for letterpress. Because of the positive nip of blanket to blanket, or blanket to steel, it is important that a sheet as mechanically perfect as possible be supplied. If you don't have uniform length around the roll at any point across the width of the press, you are going to get wrinkles which can result in cracks and broken webs, to say nothing of misregister, increased waste and quality variation.

5. Adequate and fast ink drying presented special problems to the paper manufacturer, especially as the demand grew for harder sized and coated type papers. The problem was compounded by the fact that ink manufacturers had much less latitude in compounding inks for web-offset than for web-letterpress. The ink-water relationship posed a problem, as did ink tack and stripping on the rollers, inks drying on rollers, trapping of two-, three-, and four-color process inks, etc.

Just a couple of years ago, a highly absorptive paper was required to aid ink drying to prevent offsetting and scuffing as the web passed over idler rollers or former boards. This was especially a problem on perfector type presses. Today, due to improvements in paper, drying ovens and inks, printers can take advantage of a wider range of papers and greater press speeds. The ink and oven manufacturers should receive credit for their technological improvements which have made faster ink drying possible.

I feel it necessary to emphasize that an adequate oven is necessary to capitalize fully on the speed and versatility of web-offset.

In designing papers for heat-set offset printing, careful attention must be given to the relationship of paper to ink. A proper absorptive ratio must be maintained to assure a good bond of

ink to paper, yet hold the pigment on the surface of the sheet. This allows the printer to take advantage of appearance characteristics of glossy papers and inks and improve ink mileage.

Demand for Heavier Stocks

While most of the papers used to date on web-offset are in the light weight category (30 to 50 lb.), there is a growing demand for heavier weights of 60 to 80 lb. I believe it is in this area of heavier weights that web-offset will compete for jobs formerly considered exclusively as sheet business. Web presses have demonstrated that they can economically produce rather short run job printing at a quality equal to sheet-fed presses, with the added advantage of producing a completely printed and folded job in one pass through the press.

The use of heavier weight papers often raises the question: can papers normally supplied for sheet-fed equipment, either letterpress or offset, be successfully used on web-offset equipment? The answer is that some can but many cannot, especially if the job is to be run on heat-set equipment. The base sheet and coating bond strength generally are adequate, but in the case of paper designed for letterpress, water resistance of the coating may be a problem. The qualities designed into sheet grades, where drying is strictly by penetration and oxidation, are not always compatible to fast drying by application of intense heat. The danger here is blistering of the sheet. Papers for heat-set printing must be designed to release their moisture rapidly to prevent it from turning to steam within the sheet and erupting.

I would like to stress the importance of using a paper that is designed with the process in mind, for all around good performance.

Now let us move on to the comparative cost of papers designed for web-offset and letterpress. At present, this difference is due to the more costly raw materials used in offset papers to get the added qualities of water resistance, strength, stability, wet curl resistance, etc.

I know that, especially in web-offset for competitive reasons, you would

like to get papers equal in price to comparable letterpress grades. Paper manufacturers also would benefit from dual purpose grades as this would simplify production and reduce multiplicity of grades and stocking of raw and finished material. New materials are constantly being evaluated, but these, at least for the immediate future, do not hold enough promise to say with any assurance that price and quality standardization is in the immediate future.

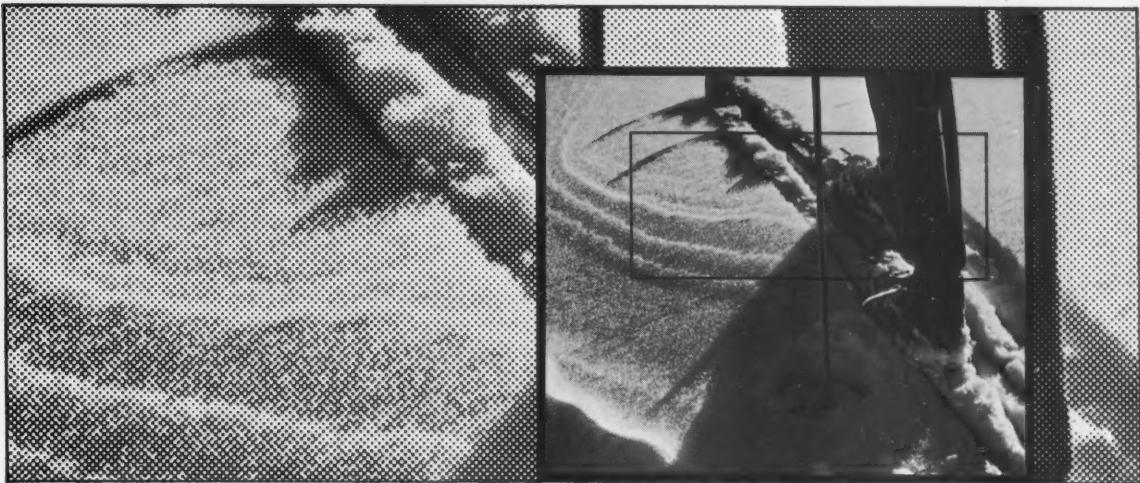
I would like to put a challenge to the offset equipment manufacturers. If a method could be devised whereby the water would be evaporated from the blanket before contact with the paper, it would constitute a big step toward standardization of papers, the possible use of letterpress papers, and reduction of price differences.

Paper from Synthetics

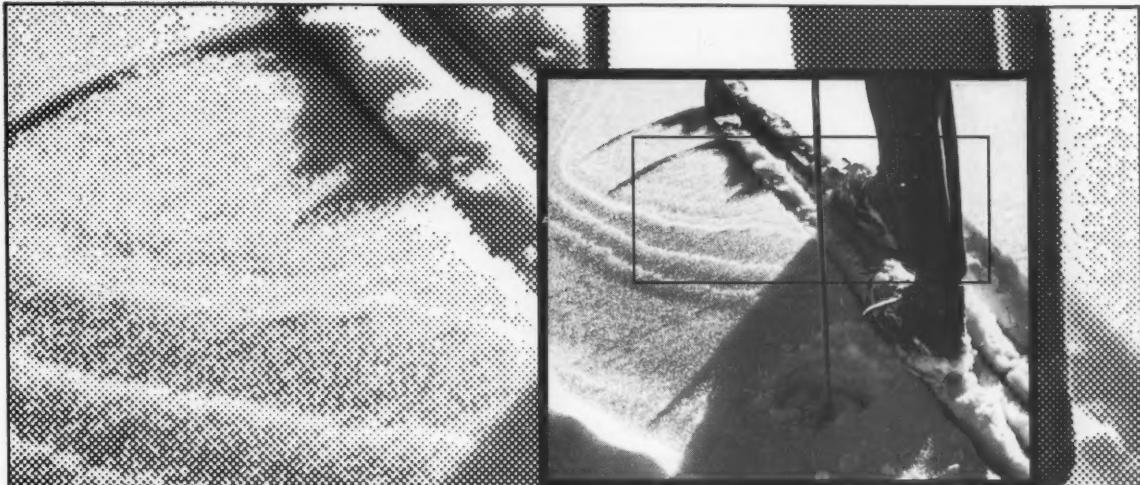
As for the future, there is in progress research for the making of paper from synthetic fibers which may have a considerable impact on the paper and printing industry. Synthetic papers of nylon and orlon have been produced on paper-making machines. Indications are that these fibers alone or in combination with cellulose, jute, or hemp hold considerable promise for specialty end uses.

The Institute of Paper Chemistry, according to a news item, is experimenting with making paper from fungi. The institute has actually produced a sheet. The process uses fungi filaments instead of wood fiber. A 100 per cent fungi paper was brittle and difficult to process, but the addition of as little as 5 per cent wood fiber largely overcame this problem. Calendared under heat and pressure, it becomes smooth, transparent, and flexible, and takes print well. It is not near commercialization yet, but who knows when it may be?

I think the rapid growth in equipment and processes in the graphic arts points up a need for technical people in the paper industry who understand the technical problems of printers and can interpret these problems to manufacturers and to lithographers if we are both to benefit, grow and prosper.★



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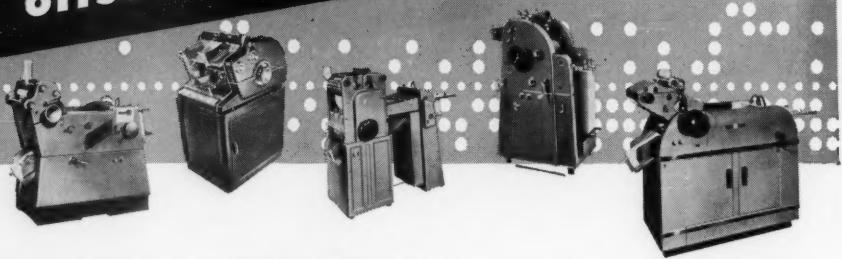
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PHOTOGRAPHIC CLINIC

By **Herbert P. Paschel**
Graphic Arts Consultant



Rapid Duplicator Platemaking

Q: I have heard that small offset plates can be made by a "reflex" process. Is there such a method, and can you explain how it works?

A.J.V., NEW HAVEN, CONN.

A: The reflex platemaking method is an offshoot of two modern office "photocopying" methods. Reflex copying itself dates as far back as 1839. It is a system for making negatives from opaque line originals (documents, letters, business forms, etc.) by simple contact techniques.

In its simplest form it requires no equipment other than that usually found in photographic darkrooms—contact printing frame, processing trays, photographic paper, etc. The reflex method is so named because the exposing light passes through the sensitive material, strikes the copy, and is differentially reflected back to the sensitive layer.

In making a reflex negative the emulsion side of a piece of photographic paper is placed against the image side of the original. This sandwich is put into a printing frame with the back of the photo paper against the glass. In exposing, the light passes through the sensitive paper first.

The radiant energy that gets through the negative paper then strikes the surface of the original. Where this light strikes the blank (white) areas of the copy it is reflected back to the sensitive emulsion, but where the letter or document con-

It is impossible for Mr. Paschel to give personal replies by mail, but all questions will be answered in this column as soon after receipt as possible. The columnist also is available to the trade as a consultant for more complex litho problems.

tains typed, written or printed matter there is little, if any, light reflected.

The basis of the reflex system is that light-sensitive silver emulsions require a specific minimum of exposure before they become developable. In reflex methods the trick is to expose so that the total of transmitted and reflected light just exceeds the threshold value enough to get adequate background density. In simple reflex copying the product is a paper negative from which positive prints can be made by the conventional contact printing method.

Obtaining correct reading positive prints directly from the initial exposure and processing operations was made possible by the invention of two transfer methods—one a purely chemical reaction, the other a physical transfer from a matrix.

1. Diffusion—Transfer—Reversal

Perhaps the most popular and well known of the first mentioned princi-

ples is exemplified by the Polaroid camera and process. Many modern office copying systems likewise operate on this idea. Diffusion-transfer-reversal, as this principle is called, requires special negative and positive papers as well as processing solutions and equipment.

Exposure of the negative paper is in the usual reflex manner. The exposed negative and a positive receiving sheet are placed face-to-face and inserted in the processing unit. By means of dividers and rollers the two sheets are carried through a developing solution separately, but in unison.

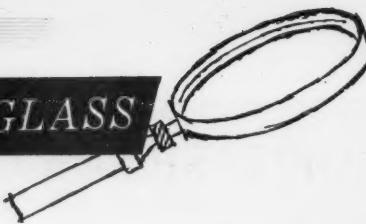
After immersion in the developer the sheets enter another set of rollers which squeegee them together and eject the sandwich from the machine. While in contact, a negative image is being developed and, at the same time, the developer dissolves some of the unexposed silver salts of the negative emulsion and deposits them on the positive emulsion layer.

This transfer of silver salts takes place only in the areas where a negative image is *not* being formed. The transferred silver salts react with substances in the positive layer to form a positive image.

After a few seconds the two pieces of paper are separated and the positive, which dries quickly, is ready for use.

An offset plate can be similarly pre-
(Continued on Page 133)

THROUGH the GLASS



AMONG the many sights to see at the LNA convention in Arizona, of which the Grand Canyon is the mightiest, was the Arizona Biltmore hotel itself. It was designed by Frank Lloyd Wright some 30 years ago but it still looks modern, featuring as it does decorated concrete blocks, steel and cement steps, large airy rooms and an unusual floor plan.

Kaye Teich, vivacious wife of LNA board member Curt Teich, was called upon on several occasions to deliver an entertaining monologue on her discomforting experience with an animal she described as a "helionmonster," on the desert near the hotel. The incident was so disquieting that Kaye had to resort to her favorite health beverage — Geritol and Clquot Club.

None of these alleged man-eating monsters was present at the cook-out and square dance, however, which was held on a nearby range, accessible by hay-wagon for the young at heart and by chartered bus for those averse to straw. The square dancing, incidentally, really brought the convention to life and was a constant topic of conversation thereafter. Music was supplied by a real country combo, while music in many of the hotel rooms was provided by Mort Schmidt and his Hawaiian guitar.

Many LNA members utilized the special convention planes from New York and Chicago for the trip to Phoenix and several even turned the long trip into a small profit by way of gin rummy. (Al Rossotti was heard to admit modestly that he picked up a couple bucks.)

The same sort of enthusiasm was evident at the NALC meeting in Washington, D.C. a few days later. Biggest news was the amazing registration for the convention, final figure going over 600. Even after discount-

ing an exceptionally large turnout of ladies and Washington lithographers, the figure is high. All but one of the 29 member clubs were represented.

The opening night Las Vegas party was a standing-room-only success and gambling with paper money after the excellent buffet yielded some handsome prizes for those fortunate enough to accumulate large amounts of the stuff. This gambling was far more fruitful than that by LNA members using the real thing at Las Vegas, Nevada, according to reports by several lithographers who flew in from that convention just in time for the NALC opener.

From the DRUPA fair come post cards from John Ellison, of Lewis Roberts Inc., and Walter Kubilius, of ATF. Both report a fine turnout and a tremendous show.



If you'd care to hitchhike to the PIA convention in Dallas, Oct. 13-16, vivacious Georgina DiNello would love to have you join her. On the way, if you can think of nothing better to do, you might discuss with her the PIA-Miller Self-Advertising competition, which closes Sept. 12. If you can't make the journey, you at least can enter the contest. Rules and entry blanks available from PIA, Washington 15, D.C. or Miller Printing Machinery Co., Pittsburgh 33, Pa.



PROFIT SHARING *and* PENSION PLANNING

By *I. Austin Kelly, III*

President, National Employe Relation Institute

FOR some time now management of medium and small size lithographic companies has been very much concerned with setting up some form of pension or profit sharing plan for key personnel. Many plant owners have told us the reason they have no plan at present is because they had gone into this matter from time to time and it seemed to be far too complicated. Secondly, they felt that being a small or medium size company, they could not afford a plan. This was all right for the large lithographers, but it was something else again for them. Thirdly, they could not make a commitment over a long period of time because they did not know what their financial condition would be in the future.

Two Basic Problems

They realize that there are two basic problems. First is to recruit good key men. Any company has a place for the right man. If it has not, it will make a place for him because he is the one who will be profitable to the company. Looking into the future, I do not think it is going to be any easier to bring this man into your company than it is at present.

Your next problem is to keep this key man after you have recruited

him. It may not be true in your industry, but I know it is true in a lot of others, that a good key man is such a difficult problem today that many companies say no matter what sort of an aptitude test you give him, there really isn't any way to test him.

For instance, we are talking about the sales force. You will train a salesman. You might put in two or three dollars for every dollar you get back until after three or four years have gone by and he has built up a clientele. Now, the first question you have to ask yourself is: Is that clientele his or is it yours? Many times by then some other competitor comes along and offers him more than you can give him.

Today that key man—and we have heard this many times—is not interested in additional income. His income is very high now and he is paying high taxes. The big thing that interests him is some form of deferred compensation, and if you can talk to him along those lines he is interested. This is one of your basic problems—how to recruit that man and how to get him on your team. Your other problem is how to keep him there.

Your next big problem, it seems to me, is that many of you have come to my office and said, "Here we started in a very conservative way. We couldn't take any money out of the business to start with. We had to plow it all in. It was a hungry busi-

ness. We had to put in more and more. Now that we are around 55 or 56 we would like to pull some of this money out of the business." Then, when you talk to your accountant you find the sad story that by the time you get it out of the business there is very little left:

There are many ways to devise a pension plan to fit the needs of a lithographic plant, and at least seven different ways to invest the fund. You can invest it in the stock market. We might put 55 per cent into common stocks, 15 per cent into preferreds, and we might put the rest into bonds, according to what the equity problem is. We might also give our client a list of preferred stocks. Mind you, the trustee makes the selection.

Secondly, you can put the money into mutual funds. We have a number of them. We have made a study of them and find that they serve a very good purpose in some of these small plans if handled properly.

Next, you can put it into a savings bank. You might also put it into a Federal Savings and Loan Association. We have many of them, at 3½%.

Then there are mortgages, of course and, last, there is the insurance company, or there is a combination of these different methods. It all depends upon what you want to accomplish and what risk you are willing to take.

Let us get to the next problem. We have a plan and we decide to

From a talk presented at the 53rd annual convention, Lithographers National Association, Phoenix, April 28-May 1, 1958.

'... any small company can set up a pension plan that will attract and hold the key men'

invest our pension fund in a certain way. How can we be sure that the money we put into this plan isn't as you might say, going down the drain? How do we know the employee is going to appreciate it? To me that is a very important question, and can be solved only if you handle five or six of these points very carefully.

The first one, without question, is the design of your plan. Watch it carefully. Design it so that you have all the flexibility in the world. Hinge it on your profits. Set it up so that it creates a form of incentive for the employee. Design it to fit your company. If you have some particular idiosyncrasies in your company, bring them out and design the plan so that you will have solved them, and yet if conditions change you can change the plan. This is *your* plan. This isn't a plan that has been all worked out and then delivered to you. That cannot be done.

Secondly, watch your calculations. There are two actuaries but one is 30 per cent cheaper than the other. They both say they can give you a certain plan. How can they do it? It's very easy. One will assume $2\frac{1}{2}$ per cent on your plan, and the other will assume $3\frac{1}{2}$ per cent or 4 per cent. One will assume that 20 people out of 100 are going to leave, and the other fellow will assume that only four will leave or die. One will assume that there are a certain number of people leaving, and another will assume that your turnover is more than that. So when you get your figures, you want to know from the actuary just what assumptions

he made and see if they are realistic.

Third, have what we call the pension trust agreement designed in such a way that you understand it. We have the services of a full-time attorney in our office. The revenue department says the smaller plans are harder to approve than the larger ones because the owner is getting too much money out of the plan. You want the trust agreement so flexible that the revenue agent is able to interpret it when he reviews the plan. It isn't the regulation, but the interpretation. You have a revenue agent in one section who interprets a sentence one way, and another who will interpret it another way. So you want your agreement prepared in such a way that you can get your approval. It requires very careful consideration and drafting, and yet you want it flexible so that you can alter it or change it or discontinue the plan at any time.

Then, of course, you go to the revenue department and get the approval. It takes quite a while but, by all means, get your approval first.

Setting Up Records

Now we come to the next problem; the problem of setting up the records.

Don't put this on to the controller and have him do it all, but keep the records in such a way that you will get some enthusiasm from the employee when you show him how the money is being accumulated for his benefit.

The last big point—and I cannot stress this enough—is prepare your own booklet of explanation. Get

away from insurance talk, get away from actuarial talk, legal talk, tax talk, and work out the booklet in such a way that—as we say in our office—the dumbest man in the plant can take it home and have his young daughter or son interpret it for him.

Finally, when you explain the plan to the employee, go over it carefully with him. Give him the figures showing him where he comes out in the plan. Then answer any questions he might have. Then go back in a week or so and see if he still understands the plan, because if he doesn't understand it, he can't appreciate it.

That has been one of the greatest weaknesses. We go into some of these places and ask the men to explain their plans. Most of them say they have a book at home. That is a very important factor.

It is the job of the consultant to go back every year or two and go over the plan again, and enter into the employee booklet the amount of money that you are putting aside for him. Once the employee understands his benefits, invariably he is going to look at the company as being his company. He is on your team. Each year he gets more money accumulated for him in the plan than he has ever managed to save before. He is going to bring new ideas to you.

Where do you get your best key men? You get your best key men from your own key man. If he is satisfied and he thinks you've got a terrific company and that you are doing a job, he will get your key men for you.

When you have done all that, and you are satisfied, the plan then is an investment and you can pull out the top drawer, where management keeps its records, and see how much money you have siphoned off for yourself. It will be an amount you would never have been able to get otherwise. These new men are taking more and more interest in the business and you are accumulating the money, and I think any small company—I don't care how small it is—can set up a plan that will attract your man, keep him and, at the same time, look after the owner who has made so many sacrifices to get his company where it is today.★

TECHNICAL SECTION



Ban on Offset Covers for Textbooks Reported at R. & E. Council Meeting

By *H. H. Slawson*

Chicago Correspondent

THE 8th annual conference of the Research and Engineering Council of the Graphic Arts Industry, in Chicago, May 21-23, revealed that the printing and lithographic industry has plenty of complicated technical problems. It also revealed that the industry is tackling this multitude of troubles and one by one disposing of them through scientific research. Some projects are being approached on a long-term basis which will yield results slowly. Others call for immediate practical solution.

One of this latter nature was a research job of tremendous importance to the lithographing industry which had been thrust onto the Book Manufacturers Institute a few weeks prior to this R. & E. Council meeting. Malcolm Frost, executive secretary of the Institute, told about it in an unscheduled report, introduced because of its urgency at the first session of the Chicago conference.

Ban on Offset

At a meeting in Oklahoma City, just one month earlier, on April 23, Mr. Frost related, the National Association of State Text Book Directors endorsed a resolution condemning the printing of text book covers by offset. This process, they charged, is not as durable as stamping with ink

because the colors rub off, light colors absorb dirt and make the books unsightly and the book's life is shortened. A long list of other faults were alleged which, this organization contends, warrants the position that books with offset covers do not conform to standards NASTBD upholds. A pledge was taken to refuse to consider or accept for adoption in their states any books with offset covers. Support was also sought for this position from the National Text Book Association.

When the Book Manufacturers Institute learned of this action, Mr. Frost said, an independent commercial research agency, U. S. Testing Co., was immediately engaged to check the charges made by the state text book directors.

Two days prior to the R. & E. Council meeting a Book Institute committee met and adopted a resolution asking the state text book directors' organization and the National Text Book Association to defer any action until an unbiased evaluation of their charges could be made.

Preliminary conclusions from the hastily organized investigation by U. S. Testing Co., Mr. Frost said, indicated that letterpress and offset are about equal in respect to resistance to abrasion, and that, in general,

lithographed covers are equal to, and in some cases, superior to letterpress covers. The sample tested was small, he said, so, for more reliable conclusive results more covers will be tested. An effort will also be made to define what is a "good" book.

The Book Manufacturers Institute report was presented at the R. & E. Council meeting for information only and no action would be taken on it, Robert E. Rossell, managing director of the Council, stated.

Getting down to its programmed business, the Council examined first powderless etching, a discussion which included an account of how one basic lithographic concept was adopted by a Lansing, Mich., printer to save his letterpress operations from possible disaster. E. W. Thomas of the Speaker-Hines & Thomas Co., who related the story, said he did not want anybody to get the idea he was singing a "requiem high mass" for letterpress. But his company had been deeply concerned over the steadily dwindling profits from its letterpress operations.

A little research project was started to determine how they could reduce costs and speed up operations. A list was made of the steps required for make-ready and, they found there

were 24 for flat-bed printing and seven on rotary presses.

In offset, on the other hand, make-ready is practically non-existent, as compared to letterpress, and the reason, Mr. Thomas explained, is that all elements in a form can be put on one wrap-around plate *before* it is placed on the press.

This indicated need for a plate similar to an offset plate and it was found in the new magnesium plate. The magnesium plate, he claimed, can be engraved in less time than is required for an Aller bi-metal plate and it does all that an offset plate is asked to do. His process, he said, is not available commercially, but he concluded, "By combining the best in offset with the best in letterpress, our letterpress department is once more showing a profit."

W. J. Frisch, Jr., of the Wright Co., Cambridge, Mass., trade platemaking firm, contributed to the powderless etching symposium an account of how his company handles the Dow etching process, along with its regular work of long standing for offset and other work.

Web Printing

Friday morning's symposium on web printing was chaired by George Harper of MacLean-Hunter Pub. Co., Montreal, who explained that the discussion had been arranged to help the growing number of printers who are considering adoption of web-fed rotary equipment but first want answers to many questions. Three speakers related how they are using web-fed presses in their respective letterpress, offset and gravure operations.

David Safran of Safran Printing Co., Detroit, who presented the case for web-offset, declared that the web-fed press has brought the printing industry out of its horse and buggy days into the jet age. Judging from results as seen in the printed product, he added, "You'd never know there was any change if you were not told of it."

Since letterpress printers consider "offset" a "bad word," he prefers to call the process "web-fed, heatset lithography." He related his company's trail blazing experiences in

shifting to web-fed lithography for production of the trade weekly, *Automotive News*. Outlining the accrued advantages, he said full-color reproduction is now possible at many times the speed possible with web-fed heatset letterpress 20 years ago. "We've taken the letterpress process of two decades ago and made it work in lithography" he declared.

Use of roll stock, he went on, has reduced paper costs 20 percent below that of sheet stock. Fine 133 to 150 line screen halftones can be used which cost less than a 55-line zinc engraving. Copy can be enlarged or reduced, making possible larger and more colorful ads that bring results to advertisers at less cost. His company favors the grainless Lithengrave plate because of its ability to improve printing quality.

William Ward, III, executive of Baird-Ward Printing Co., Nashville, explained how his firm uses web-fed presses for production of periodicals, telephone books and other long run jobs. The speaker for web-fed rotogravure printing was Charles Edson, vice president of Kable Printing Co., Mount Morris, Ill.

Russell Parrish, of Meredith Pub. Co., Des Moines, who followed, made some observations on the utility of web-fed printing in general, then concentrated on the need for improvements in letterpress operations using web-fed presses. Speaking as a representative of the letterpress field, he declared that "the inroads of offset and rotogravure should put us to shame." Progress in those fields, he pointed out, has been due to scientific research and, he added, "our salvation as letterpress printers will come only through the proper application of science to our operations. As yet the research we have done has only scratched the surface."

Questions directed at the panelists from the floor indicated much interest in the problem of curbing paper waste on web-fed presses. It seemed to be agreed that the normal expected waste is from six to eight percent of the run but no concrete suggestions were offered for reducing this.

Thursday afternoon's "We've Got Problems" session heard, first, reports from the R. & E. Council's five standing committees. Alan S. Holliday, of Craftsmen, Inc., Kutztown, Pa., as chairman of the committee on composition, reported that a study is under way into the possibility of constructing a completely automatic composing machine that would set type without human hands. The committee working on this has been named the "Blue Sky" committee but they're very serious about it, Mr. Holliday indicated.

Others who reported were Dr. Marvin C. Rogers, printing consultant, chairman of the photomechanics and platemaking committee; Dr. William Walker, West Virginia Pulp & Paper Co., chairman of the printing committee; C. M. Flint, Charles T. Main, Inc., chairman of the engineering and materials handling committee; and Edd Shipley, Kingsport Press, who substituted for E. J. Triebe, chairman of the bookbinding and finishing committee.

C. L. Jewett, of Minnesota Mining & Mfg. Co., who monitored this session, declared that the volume of original research work being done by these five committees "is truly impressive and clearly indicates that our Council program for technological advancement of the printing industry is not academic."

The question "What is the present status of dry offset?" which was raised from the floor during this "problem" session, was answered by Dr. Walker of the printing committee. Nearly every new printing process, he observed, eventually finds its niche and dry offset has settled down in the area where it belongs.

At present, he said, there are relatively few active installations of dry offset, best known of these being at the Federal Bureau of Engraving, where it is used for printing cigarette and other excise tax stamps. In some other places where the process has been tried, it at first looked good but has since run into serious difficulties, he advised. Among other problems he mentioned close control of roller and

(Continued on Page 121)

TECHNICAL BRIEFS

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LTF also has mimeographed lists of (1) "Periodicals Abstracted by the Research Department" and (2) "Books of Interest to Lithographers." These are available for twenty-five cents each in coin or U. S. stamps. All inquiries concerning these lists and photostats of original articles (not marked with an asterisk) should be addressed to: Lithographic Technical Foundation, Inc., Research Department, 1800 So. Prairie Ave., Chicago 16, Ill.

Photography, Tone and Color Control

PRINT TIMER CONTROLS DENSITY AND CONTRAST. James D. Weir. *Electronics*, Vol. 31, No. 7, February 14, 1958, pp. 108-109, 2 pages. Electronic timer, used to develop photographic prints of consistent quality makes use of phantastron circuit to arrive at the right combination of exposure time and color filter necessary to obtain and repeat the desired exposure values. Timer controls two variables, density and exposure time, to faithfully reproduce the tones of the original scene.

*PREPARATION OF A BLACK PRINTER. British Patent 739,397. Filed in the U. S. Aug. 27, 1952 and in Great Britain Aug. 26, 1953. J.A.C. Yule—Assigned to Eastman Kodak Co. *Monthly Abstract Bulletin*, Vol. 43, No. 7, July 1957, page 435. A black printer, suitable for use in four-color printing processes, is prepared by electronically scanning a colored original to produce electrical picture signals corresponding to the three subtractive colors, which, in turn, produce an electrical, black-printer signal dependent upon the sum of two values, one based on the visual tonal density at each picture point of the original, and the other, on the density of the least dense of the three subtractive colors at that picture point. A

components of the original, and, in a fourth channel, an electric signal corresponding to the ortholuminous value, i.e., how dark the area appears to the human eye, of the original; reducing the latter signal with the signals derived from at least the cyan- and the magenta-printer signals; and then employing for such scanning a light beam whose intensity is determined by the reduced signal.

*IMPROVEMENTS IN BLACK PRINTERS AND ELECTRO-OPTICAL METHODS OF MAKING THEM. British Patent 736,864—Filed Sept. 8, 1952. J.A.C. Yule—Assigned to Eastman Kodak Co. *Monthly Abstract Bulletin*, Vol. 43, No. 7, July 1957, page 435. A black printer, suitable for use in four-color printing processes, is prepared by electronically scanning a colored original to produce electrical picture signals corresponding to the three subtractive colors, which, in turn, produce an electrical, black-printer signal dependent upon the sum of two values, one based on the visual tonal density at each picture point of the original, and the other, on the density of the least dense of the three subtractive colors at that picture point. A

light beam of variable intensity, which is controlled by the black-printer signal, scans a light-sensitive layer in synchronization with the scanning of the original; and the layer is then processed to a photographic black printer. The method can be applied to color-corrected, electrical picture signals. Corresponds to U.S. 2, 2,748,190.

Lithography—General

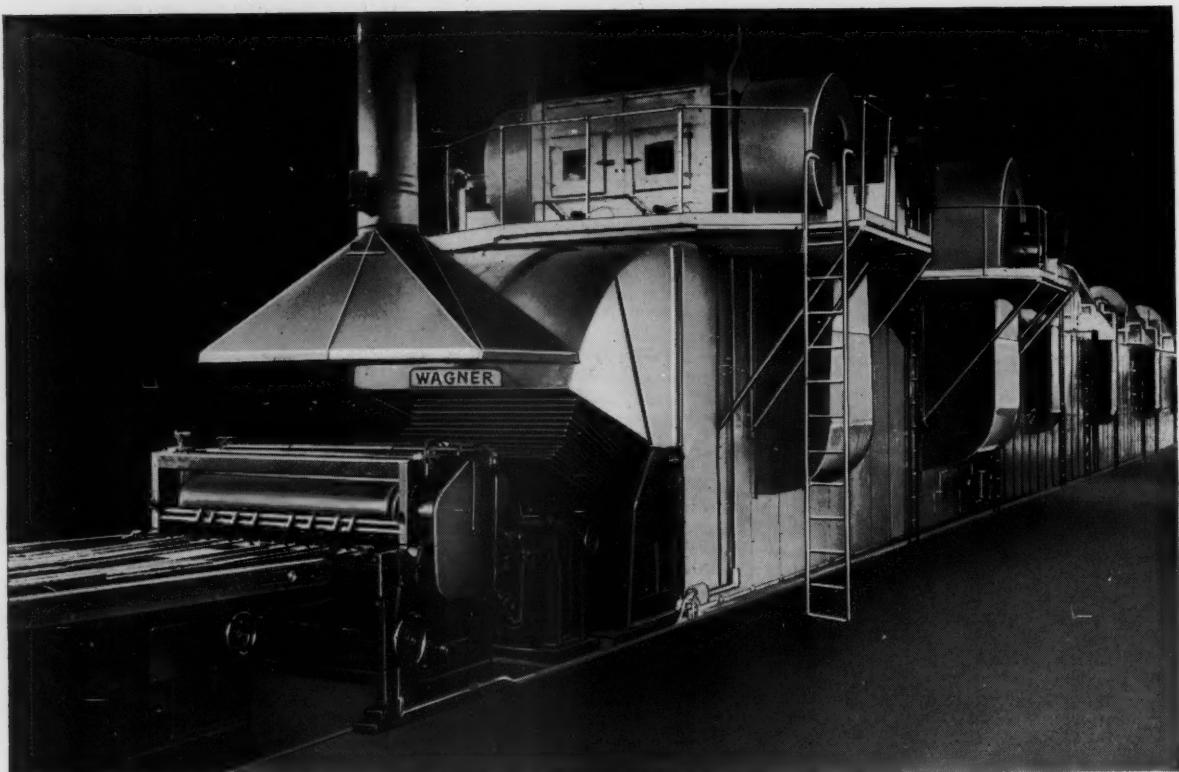
THE FUTURE OF LITHOGRAPHY. P. H. Lyle. *Lithographer's Journal* 42, No. 9, December 1957, pp. 15-18, 49 (5 pages). Substantial developments in the lithographic process have intensified since World War II. The Lithographic Technical Foundation's organized research activity has contributed to definite controls. Through technological progress the over-all costs are generally lower, make-ready time is shorter and production is most expedient. In the field of commercial printing, work now being done by letterpress could be done more efficiently by the offset process. There are some disadvantages in lithography but they are in the minority and are rapidly being eliminated.

Graphic Arts—General

SOME ASPECTS OF THE APPLICATION OF ELECTRONIC ENGINEERING TO THE PRINTING INDUSTRY. E. B. Humphries. *IX International Congress of Master Printers*, Report 9, 1957, pp. 6-8 (3 pages). Various aspects of the employment of electronic devices are discussed from the viewpoint of a practicing printer. These uses are discussed under the headings of Memory, Scanning, Typesetting, Photography, Electronic control of register, Bindery, Paper thickness control and Speed Control. The conclusion suggested is that future developments will lead to more extensive use of such devices and to an improvement in both output and quality due to a greater degree of control.

BICHROMATE IN GELATIN RELIEF PRINTING PLATES. Dr. Carl S. Miller. *Grafica Scientifica. Graphic Arts Monthly*, Vol. 29, No. 12, December 1957, pp. 134, 136, 2 pages. The principle of the Collobloc method of using a bichromated gelatin for the production of a printing plate is discussed. A gelatin coated tissue is coated face down in a bichromate solution and then squeegeed face down on a ferrotype for drying. The dried tissue is exposed, face up through a halftone and then given an overall exposure with the halftone removed. The gelatin layer is now transferred to the base from which printing is to be done. Evidently, the halftone exposure results in spots of chromic salts which are of the same concentration per unit area, on the surface of the gelatin. The overall exposure creates a dilute layer of chromic salts of uniform concentration between the dots. On transferring the gelatin film to the metal base with water, the chromic salts diffuse through

(Continued on Page 133)



Above: The Wagner D.E.F. Oven for 55 Gallon Drum Body Sheets.

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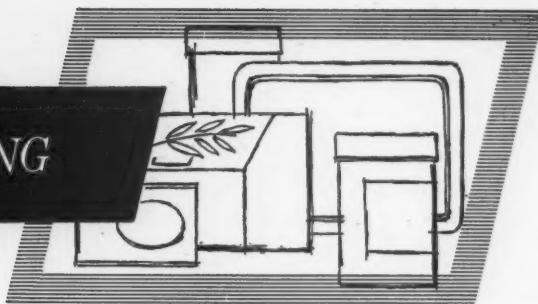
Metal Decorating Machinery

555 Lincoln Avenue, Secaucus, N. J.



Division

METAL DECORATING



American Can Expands Vernon, Cal., Plant With Big Addition

AMERICAN Can Co. recently expanded its plant in Vernon, Cal., adding approximately 290,000 square feet of floor area to the plant's present 625,000 square feet. The expansion program makes the can-manufacturing plant the largest of its type in the West, in terms of floor-area, and one of the six largest can factories in the world.

Participants in groundbreaking ceremonies several months ago at the plantsite were R. C. Stolk, vice president in charge of West Coast operations for American Can; Charles E. Ducommun, president of the Los Angeles Chamber of Commerce, and E. Russell Werdin, president of the Vernon Chamber of Commerce.

The Canco expansion project involved erection of two separate structures, one designed to provide additional warehouse area, the other to house new processing equipment which will convert 15,000-pound coils of steel into standard can-making plate.

The warehouse structure, with an area of 200,000 square feet, is 600 feet long by 340 feet wide, with concrete exterior walls and long-span wood-truss roof construction. The giant warehouse, with vertical storage space of 29 feet is capable of sheltering more than 100,000,000 containers at one time. It is located on the north side of the existing plant, at 4815 Santa Fe Avenue.

The warehouse occupies the major part of a new plot of 6.79 acres, purchased by Canco from Safeway Stores

through the Roy C. Seeley Realty Co. Designed in consultation with the Canco Engineering Department, the warehouse building was built by the John A. Alexander Co., general contractors.

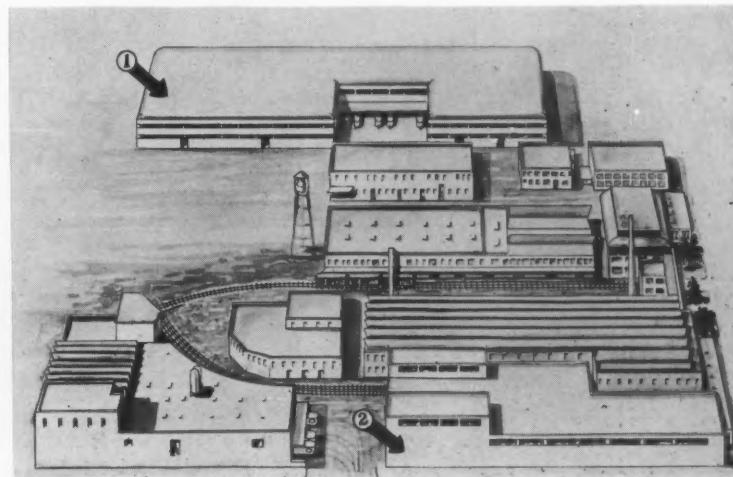
The steel-coil processing building, constructed by the J. H. Pomeroy Co., has a total area of 90,000 square feet. The coil facility, part of a multi-million dollar nationwide program by Canco, houses three processing lines for inspecting, straightening and cutting 15,000-pound coils of steel plate into rectangular shapes capable of being lithographed and otherwise processed into can-ends and can-bodies.

The coil processing operation, first of its kind in the can-manufacturing industry in Southern California, rep-

resents a metal preparation activity which formerly had been handled for Canco in the steel mills. The can-making firm has announced that it will take over the coil-processing work in Los Angeles and at other points throughout the continental United States, as one step toward holding the line against spiraling costs of containers.

The new coil-processing building in Vernon, located south of the existing can-manufacturing plant, is 500 feet long and 210 feet wide. The one-story structure, featured by extra-heavy nine-inch double reinforced concrete floors, has walls of reinforced concrete construction. The building is stressed for possible later addition of a second story to provide expansion room for can-manufacturing facilities. The coil processing building is equipped with a 10-ton overhead crane geared to carry incoming coils of steel to the three processing lines.★

American Can Co. expansion in Los Angeles is shown in this aerial sketch. New construction includes (1) a 200,000 sq. ft. warehouse structure and (2) a 90,000 sq. ft. processing center.





8
 Pretty engineer holds unique metal can produced by J. L. Clark Co., Rockford, Ill., which won recognition as one of the outstanding examples of metal lithography in the recent Lithographers National Association exhibition. (See Metal Decorating Section, May *ML*.) Clark's four-color container was produced for the Reading Railroad of Philadelphia, which is this year observing its 125th anniversary, as a souvenir containing pretzels, a popular food in the Pennsylvania area. The decoration depicts the route of a steam locomotive, "Old Ironsides," used by the railroad more than 100 years ago, from Philadelphia through the Pennsylvania Dutch country to Reading. This is the third award winner in the last four years for Clark. Can was designed by Clark's Liberty Division in Lancaster, Pa., under the direction of the late John W. Roberts.

Wins Safety Awards

The Central Metal Master Plate division, plant 68, of the Continental Can Company, has been awarded a company plaque for completing 10 calendar years without incurring a disabling injury.

The plant also received plaques from the Can Manufacturers' Institute and Liberty Mutual Insurance Co. for having worked 1,000,000 man hours without a disabling injury. The plant produces art work, photography and offset plates.

NMDA To Meet in October

The annual convention of the National Metal Decorators Association, Inc., will be held Oct. 6-8 at the Penn Sheraton Hotel, Pittsburgh.

Special emphasis will be placed on new developments in materials and machinery.

Members of the convention committee are Harold W. Lee, Robert L. Singley, B. F. Hofferth, James G. Smith, Howard Cantwell, James L. Burns and William A. Westphal.

Litho Schools

Canada—Ryerson Institute of Technology, School of Graphic Arts, 50 Gould St., Toronto, Ont., Canada.

Chicago—Chicago Lithographic Institute, 1611 W. Adams St., Chicago 12, Ill.

Cincinnati—Ohio Mechanics Institute, Cincinnati, Ohio.

Cleveland—Cleveland Lithographic Institute, Inc., 1120 Chester Ave., Cleveland 14, Ohio.

Los Angeles—Los Angeles Trade Technical Junior College, 1646 S. Olive St., Los Angeles 15, Calif.

Minneapolis—Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis 3, Minn.

Nashville—Southern School of Printing, 1514 South St., Nashville, Tenn.

New York—New York Trade School, Lithographic Department, 312 East 67 St., New York, N. Y.

Manhattan—School of Printing, 72 Warren St., New York, N. Y.

Oklahoma—Oklahoma A & M Technical School, Graphic Arts Dept., Okmulgee, Okla.

Rochester—Rochester Institute of Technology Dept. of Publishing & Printing, 65 Plymouth Ave., South Rochester 8, N. Y.

Philadelphia—Murrell Dobbins Vocational School, 22nd and Lehigh, Philadelphia, Pa.

Pittsburgh—Carnegie Institute of Technology, School of Printing Management, Pittsburgh.

San Francisco—City College of San Francisco, Ocean and Phelan Aves., Graphic Arts Department.

St. Louis—David Ranken, Jr., School of Mechanical Trades, 4431 Finney St., St. Louis 8, Mo.

Vancouver—Clark College.

West Virginia—W. Va. Institute of Technology, Montgomery, W. Va.

Trade Directory

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 Wade E. Griswold, Exec. Dir.
 131 East 39th St., New York 16, N. Y.

National Assn. of Photo-Lithographers
 Walter E. Soderstrom, Exec. V.P.
 317 West 45th St., New York 36, N. Y.

Lithographers National Association
 Oscar Whitehouse, Exec. Dir.
 1025 Connecticut Ave., N.W.
 Washington, D. C.

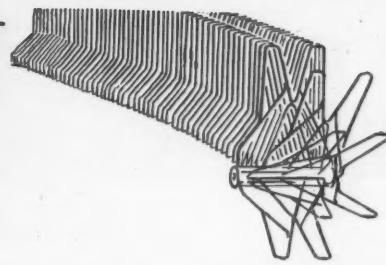
National Assn. of Litho Clubs
 Edward L. Bode, secretary
 504 Marjorie Ave.
 Dayton 4, Ohio.

Printing Industry of America
 Bernard J. Taymans, Mgr.
 5728 Connecticut Ave., N.W., Washington, D.C.

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You can be sure of the best when you select a Young Brothers Oven because it is the product of the finest experience in the industry — that is why it will bring added profits out of your production.

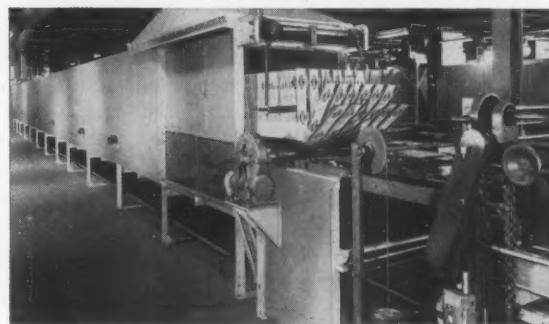
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D.I.F. Metal Decorating Oven with zone control and recuperative cooling

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LITHO CLUB NEWS

Philadelphia

Describes Club Movement

A booklet describing the Litho Club movement has been developed by William Weiss and Stephen Rubenstein.



The New Litho Club Booklet

stein of the Philadelphia Litho Club and printed in Mr. Rubenstein's plant, Colorcraft Lithoplate Co.

Written for the National Association of Litho Clubs, the booklet, entitled, "Meet a Litho Clubber," was printed in two colors by offset.

The booklet begins by outlining the objectives of the Litho Club and how it helps members to keep abreast of changes and solve problems through cooperation.

Membership requirements, which vary from club to club, are briefly mentioned and typical meetings and activities are described.

How to start a new club is thoroughly covered within the pages of the eight-page booklet, and a list of suggestions to help form one is listed.

It tells how to contact potential members and stimulate interest among area lithographers and outlines the help NALC can provide in such endeavors.

Agency Activities Discussed

A look at the operation of an advertising agency and its relationship to the lithographer was the original program held by the Philadelphia Litho Club on May 26. The speaker was Harold Seeburger, production manager for Arndt-Preston-Chapin-Lamb & Keen, Inc.

Mr. Seeburger pointed out the importance of shop supervisors knowing more about the agencies, their requirements, and their need for services which are sometimes unusual.

The speaker is responsible for the management and operation of the agency's production department including all material produced for the company and its clients.

Detroit

Starts Round Table Discussions

The May meeting of the Detroit Litho Club featured what may become a permanent part of the monthly meetings—round table discussions.

Tables were set aside for those interested in art work, camera, striping, platemaking, presswork and ink, with an "expert" presiding at each table. Members sat at the table of their choice to discuss various problems and ate there so that discussions were carried on right through the meal.

The system is too new to evaluate the response, but if members so indicate, it will become a permanent fixture.

The club's annual Spring dance took place May 24 at the St. Clair Yacht Club.

Chicago

Discusses Counterfeiting

The Chicago Litho Club at its May meeting heard a talk on "Counterfeiting" by Sidney J. Franklin of the U. S. Treasury's Chicago district office. Mr. Franklin explained the functions of the Secret Service and statutes relating to the printing or photographic reproduction of money.

He cited several case histories about lithographers who had fallen afoul of the law, including several in Chicago, and emphasized that "you don't have a chance." If any litho firm head allows his employees to have access to the plant after hours, he suggested that the employer know what is going on there.

The Treasury department, he said, has had material assistance from printers and suppliers in its constant battle against counterfeiters and he appealed for a continuance of that support.

The May meeting closed the Chicago Club's educational programs for the summer. Meetings will be resumed in September and Edward M. Harwood, club president, promised that programs for the upcoming year will be "bigger and better" than ever. He also announced that the annual club golf outing will be held Sept. 9 at the Nordic Hills Country Club.

Cleveland

S. A. Lithographer To Visit Club

The fact that American lithographic publications have a wide following all over the world was proved recently when the Cleveland Litho Club received a letter from Manfred Rosenow, a photolithographer from Barranquilla, Colombia, South America.

Mr. Rosenow wrote that he had read of the Cleveland Litho Club's many activities and planned a visit to the area in the near future. He expressed hope that he could get together with club members to "talk litho."

In his letter he also outlined the development of lithography in his country.

Washington

Halpern Addresses Club

Bernard R. Halpern, technical representative for the DuPont photo products department, was the guest speaker at the May 27 meeting of the Washington Litho Club.

Mr. Halpern discussed techniques and progress in the preparatory areas of stripping, photographic procedures and materials, and photo-composition. He is the author of three textbooks for the Lithographic Technical Foundation on stripping and color.

This month the club will be the guests of the Harrigan and Moreland Roller Companies for a tour of the Moreland Rubber Co. plant in Willow Grove, Pa.

New members of the club are Milton S. Fall and Bernard R. Trice of Lewis Roberts, Inc.; Henry J. Laupp and Richard R. Patschke of Judd & Detweiler, Inc.; Maurice R. Robb, Lanman Offset; and Robert W. Parsons, Haynes Lithograph Co.

Buffalo

Chopin Addresses Club

Forty members of the Buffalo Litho Club met at the 40 & 8 club on May 7, to hear William L. Chopin, eastern sales manager for the Kimberly-Clark Corp., speak on "Paper for Offset."

Donald Pinzel, who represented the club at the National Association of Litho Club's convention in Washington last month, reported on his experiences in the nation's capital.

The club's next meeting is scheduled for Sept.

New York

Holds Ink Night

Three prominent ink companies got together on May 28 to present a program on gold, quick set and gloss inks for the New York Litho Club meeting at the Shelburne Hotel. The program also included considerable discussion on ink coverage and estimating.

Frederick Dankert, Howard Flint Ink Co.; Vincent Subenski, Seaboard

Ink Co.; and William Brunk of Sleight Hellmuth Ink Co., conducted the program and presided over the active question and answer session which followed.

New members inducted into the club at the meeting are Edgar L. Budden and Antonio F. Vanacoro.

Twin City

View 3M Exhibit

On June 5, members of the Twin City Litho Club met at the Calhoun Beach Hotel to view the traveling Minnesota Mining & Manufacturing Co. exhibit, "Print-O-Rama."

The exhibit features a contractible dampening roller and disposable sleeve for lithography, a positive plate, an image developer for negative plates and a plate cleaner.

Paul F. Schmidt, president of the Harold M. Pitman Co., was the speaker for the May meeting. He described the different types of plates in use today and how they are made.

•

Two Canadian Clubs Unite

A noteworthy step has been made in Canada with the merging of the Ontario and Quebec Litho Clubs into a single organization with the purpose of working together for the continued advancement and betterment of lithography in Canada.

Called the Canadian Litho Club, the newly formed group has as its chairman George M. Stockless, Ralph Clark-Stone-Benallack Ltd., Montreal, president of the Quebec division.

Other executives of the club are Max H. Lamb, Dyment Ltd., Toronto, president of the Ontario division; A. Ronald Reid, Consolidated Lithographing Mfg. Co., Montreal; Theodore Dyment, Dyment Ltd., Montreal; James O'Reilly, R-C-S-B, Ltd.; Vincent B. Black, Canadian Fine Color Co., Ltd., Toronto; Frank Johnson, Bridgens Ltd., Toronto; and Kenneth S. Duncan, Commercial Papers Ltd., Toronto.

The Ontario and Quebec Litho Clubs were founded in 1949 and 1950 respectively, as a result of a need for

Litho Club Secretaries

ATLANTA: Hulan Hill, 590 Glendale Dr., Decatur, Ga.

BALTIMORE: Harold E. Hackman, 5412 Leith Rd., Baltimore 12.

BOSTON: Vincent J. Aliberte, 2010 Revere Beach Pkwy., Everett 49, Mass.

BUFFALO: Edmond S. Sendker, 978 Ellicott St., Buffalo 9

CANTON: Clayton Betz, 531 Grosvenor Dr., Massillon, O.

CHICAGO: James V. Gianpetro, 40 S. Clinton St., Chicago 6

CINCINNATI: Harold Biddle, 3308 Galbraith Rd., Cincinnati

CLEVELAND: Alvin Martin, 1011 Power Ave., Cleveland 14

COLUMBUS: Edward Carter, 873 Williams St., Columbus 8

CONNECTICUT VALLEY: James W. Bellamy, 72 Steuben St., Indian Orchard, Mass.

DALLAS: A. G. Copeland, 3116 Commerce St., Dallas

DAYTON: Loomis Pugh, Route #2 Troy Rd., Springfield, O.

DETROIT: Erhard B. Toensfeldt, 2000 W. Eight Mile Rd., Ferndale 20, Mich.

FORT WORTH: Paul Hansen, 5317 6th Ave., Fort Worth

HOUSTON: Frances Porter, 2301 Huldy St., Houston 19

LOS ANGELES: Al Griffin, 520 Monterey Rd., S. Pasadena

MILWAUKEE: Jack W. Miller, 2572 N. 21st St., Milwaukee

NEW YORK: Louis Happ, 11 Darby Court, Malverne, N. Y.

PHILADELPHIA: Joseph H. Winterburg, 618 Race St., Philadelphia 6

PIEDMONT: Mrs. Jo Woody Shaw, 502 Security Bank Bldg., High Point, N. C.

ROCHESTER: Edward Potter, 196 Somershire Drive, Rochester 17

SHREVEPORT: Roena Bradford, Post Office Box 397, Shreveport

ST. LOUIS: Ray K. Eckles, 7023 Radom, St. Louis 16

TULSA: Mrs. Madeleine K. Hare, 2521 South Birmingham Place, Tulsa 14

TWIN CITY: Mr. Clifford Goebel, 138 Montrose Place, St. Paul

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the executives of lithographic companies to become better acquainted by social and educational activities of the group.

At the time of the amalgamation, the Ontario division had 33 members, representing 23 lithographic firms; and Quebec 17 members representing 12 firms.

Foil Talk At Cleveland

Members of the Cleveland Litho Club heard a talk entitled, "Printing of Aluminum Foil by Lithography," at the club's May 23 meeting.

James Trousdale, Cochran Foil Co., conducted the program.

On June 21, the club will hold its annual picnic at Sally West Grove. The program will include games for the children, races, prizes, a baseball game between the suppliers and lithographers, free beer, and other refreshments.

Young Lithogs.

Visit Paper Mill

Members of the Young Lithographers Association were guests of the Hamilton Paper Co., Miquon, Pa., on May 14, for a tour of the company's paper-making facilities.

Navigators Elect Officers

The Navigators club of New York met on May 9 at the Cornish Arms Hotel to conclude its business for the season and elect officers for next year. August Schellhammer, Bigelow-Sanford Carpet Co., vice president for the current term, was elected president to succeed Jack Russell, Printers Bindery.

Other officers selected were Lawrence J. Berman, Marquardt & Co., vice president; Walter D. Munro, New Era Lithograph Co., treasurer; and Richard Fernandez, Caxton Press, secretary.

The club voted to publish the complete proceedings of the Navigraphic forum sponsored by the group earlier this spring. The book, which is expected to be ready next fall, will be distributed to all who attended the forum. Additional copies will be sold to any who desire the transcript of the proceedings.

St. Louis

Holds Employer's Night

The St. Louis Litho Club held an "Employer's Night" on June 5, at the Ambassador Kingsway Hotel, with Thomas McCabe, Jr., executive director of Printing Industry of Pittsburgh, as the principal speaker.

The club is planning to hold its annual boat ride on the Mississippi River June 20. Tickets for the event are \$1.50 a person.

Houston

Visits Photostat Corp.

Members of the Houston Litho Club were guests of the Photostat Corp., late in April, for a demonstration of the Photostat master plate unit and the Whitin Masterlith offset press.

Paschel Discusses Color

Herbert P. Paschel, graphic arts consultant, discussed visual variables as related to color reproduction before members of the New York Lithographers Guild on May 15, at the Hotel Martinique. He accompanied his talk with 40 slides demonstrating visual variables.

Mr. Paschel said that before many of the current problems existing in the field of color reproduction can be eliminated or minimized, it is necessary that both buyer and producer have a better understanding of how we see color.

N. Y. Craftsmen Elect Officers

The New York Club of Printing House Craftsmen held its annual election of officers on May 15 in conjunction with the final educational program before the summer vacation period.

Officers who were reelected are Charles J. Felton, president; Louis Van Hanswyk, first vice president; Mortimer S. Sendor, treasurer; and Louis A. Croplis, secretary. Anthony C. Ferrara was elected second vice president, replacing Peter J. Bernard, who declined to run for office again because of illness.

The educational portion of the meeting was devoted to a talk on "The Camera in the Composing Room" by Joseph F. Weiler, Marchbanks Press; and a discussion and demonstration of the new ATF Type-setter conducted by Harry E. Stoddard, product manager.

Heads Printing Guild

Daniel Dore, Batt, Bates & Co., has been elected president of the Washington Printing Guild. Other officers elected at a meeting on May 13 are Russell Webster, Baker-Webster Printing Co., vice president; Kenneth Williams, Potomac Electrotypes Co., treasurer; and Richard Evans, Judd and Detweiler, Inc., secretary.

Giant Packaging Show Opens

As ML went to press the 27th National Packaging Exposition opened in New York's Coliseum with hundreds of exhibits and new packaging aids on display to record crowds.

Among the prominent lithographers represented were The United States Printing & Lithograph Co., Cincinnati and the Rossotti Lithograph Corp. of North Bergen, N. J.

U. S. Printing displayed a new label finish called "U-S Super Glaze," a high reflective, lustrous finish which is said to resist scuffing better than standard finishes.

The Rossotti booth featured unusual folding cartons, labels and multi-packs for producers of frozen foods, macaroni, canned foods and others.

Other exhibitors included the Crown Zellerbach Corp.; Oxy-dry Sprayer Corp.; Ortmain-McCain Co.; General Printing Ink Co. Div. of Sun Chemical Corp.; The Champion Paper and Fibre Co.; Nashua Corp.; Kleen-Stik Products, Inc.; Simco Co.; Sinclair & Valentine Co.; and the International Printing Ink Div. of the Interchemical Corp.

Electrotypes To Meet

The 61st annual convention of the International Association of Electrotypes & Stereotypers, Inc., will be held Sept. 8-11 at the Chalfonte-Haddon Hall Hotel in Atlantic City, N. J.

READERS:

*Are you taking full advantage
of your lithographic magazine?*

THE staff of *Modern Lithography* has been trying, in several important ways, to make the pages of your magazine more valuable to you. Increased in-person coverage of litho club and trade association meetings has been one way. Interpretative articles on subjects of vital interest to you is another. That's the reason for our recent series on presensitized plates, three-color direct separation, and visits to typical litho shops and for our expanded coverage of the litho news in all parts of the United States and foreign countries.

Our climbing circulation figures indicate your appreciation of our efforts. But are you taking *full* advantage of your lithographic magazine? In past months, many of you have availed yourself of the services of our two regular columnists, *Theodore C. Makarius* (Press Clinic) and *Herbert P. Paschel* (Photographic Clinic). The purpose of this page is to remind you that if you have a troublesome problem regarding press or camera, these specialists are ready to help you solve it. If you are a subscriber to *ML* and have a question, why not jot it down on the coupon below and send it along to us? We'll be glad to help you, and the service is free.

MODERN LITHOGRAPHY

Box 31, Caldwell, N. J.

Mr. Makarius
(Press)

Mr. Paschel
(Photography)

My Question: _____

(Questions will not be answered by mail, but in an early issue of *Modern Lithography*)

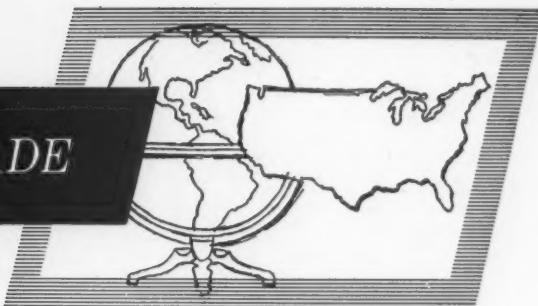
Name

(Only your initials will be used)

Company

Address

NEWS about the TRADE



Blank Accepts NYEPA Post

THE New York Employing Printers Association has announced the appointment of Edward Blank to the newly created post of director of pro-



Edward Blank

duction management and new developments. Mr. Blank has resigned as assistant to the president of Publishers Printing-Rogers Kellogg Corp. in order to accept the position.

Mr. Blank, one of the industry's better known production executives, will assume the task of keeping NYEPA members abreast of technological advancements and new techniques in both lithography and letterpress. He will serve members through personal consultations and plant visits and will coordinate the association's services to member firms in the field of equipment and production.

Donald H. Taylor, association president, said that the new staff position is in furtherance of NYEPA's objective of providing the kind of specialized, professional services that few firms are able to provide for themselves. "We observed Mr. Blank's fine work at Publishers Printing-Rogers

Kellogg Corp.," said Mr. Taylor, "and were also impressed with his activity on behalf of industry-wide educational and technical projects."

Samuel Field, president of Publishers Printing-Rogers Kellogg Corp., said that he deeply regretted losing Mr. Blank as a "valued associate" but felt that the entire industry would profit from his work with the association.

Mr. Blank will assume his new duties on June 16.

LNA Winners in NY

The first New York showing of the 282 winners in the 1958 Lithographic Awards Competition sponsored by the Lithographers National Association will take place June 10-13 in Gallery A of the Architectural League, 115 East 40th St., New York.

The awards exhibit, consisting of 70 panels of winning specimens, posters and point-of-purchase displays, appeared in Chicago May 20-22.

LNA has mailed 25,000 copies of the awards competition catalog, illustrating all of the winners, to a select group of printing buyers and lithographers. Additional copies will be distributed to industry and advertising representatives attending the exhibit showings scheduled during the year in principal cities.

The attractive 86-page catalog was designed by the Tanner-Brown Art Studios in New York. The four-color cover was lithographed by R. R. Heywood Co., New York; and the two-color inside pages by Snyder & Black in White Plains, N. Y.

Copies of the catalog are available on request to Herbert W. Morse, LNA promotion director, 597 Fifth Ave., New York 17.

3M Sues Harris

Minnesota Mining & Manufacturing Co. has brought a patent infringement suit against Harris-Intertype Corp. of Cleveland, O., and its subsidiary Lithoplate, Inc., of El Monte, Cal.

The suit was filed in U. S. district court in Chicago. In it 3M charges the defendants with infringing its patent on presensitized lithographic printing plates.

Harris-Intertype officials say they believe the suit is "without substance," and that they plan to contest it.

Elected To Forbes Board

Everett W. Smith has been elected to the board of directors of the Forbes Lithograph Mfg. Co., Chelsea, Mass.

The company also has announced the election of Raymond D. Balcom to the post of assistant treasurer.

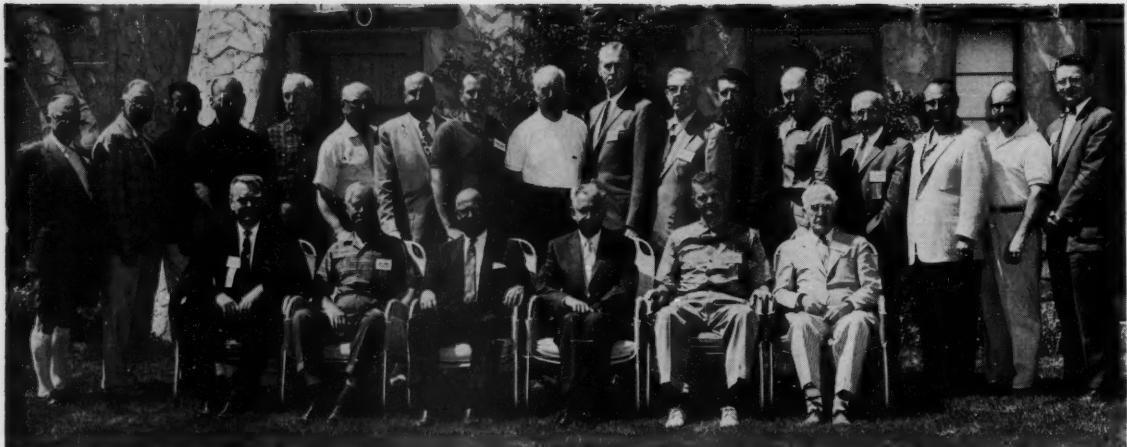
To Give Commencement Address

Harry Porter of Harris-Intertype Corp. will be the commencement speaker at the graduation ceremonies of the 1958 class at the Chicago Lithographic Institute this month.

During the summer months all classes at the Institute will be suspended and the opportunity utilized for a thorough overhauling of all equipment in the school. Most of it is new and in fine condition but "we want to keep it that way," said James K. Martin, manager of the Chicago school.

Earnings Up For \$1958

Net income of the U. S. Playing Card Co., Cincinnati, for this year's first quarter was \$605,361, equal to \$1.57 per share. For the same period last year, net earnings were \$589,857, or \$1.53 a share.



1958-1959 LNA officers and board of directors who conferred at the 53rd annual convention at Phoenix, on May 1. Seated (l. to r.) are LNA executive director Oscar Whitehouse; Carl R. Schmidt, Schmidt Lithograph Co., honorary director; Carl N. Reed, Niagara Lithograph Co., chairman of the board; Lester E. Oswald, The E. F. Schmidt Co., president; William E. Zabel, Jr., Zabel Brothers Co., Inc., vice president; Maurice Saunders, honorary chairman of the board. Directors standing (l. to r.) are Thomas Stevenson, Jr., Stevenson Photo Color Separation Co.; Ernest E. Jones, Graphic Arts Corp. of Ohio; Edward K. Whitmore, Oberly & Newell Lithograph Corp.; Edward E.

Loebe, The Regenstein Corp.; John H. Harland, John H. Harland Co.; William M. Winship, Brett Lithographing Co.; Alfred F. Rossotti, Rossotti Lithograph Corp.; Richard Walters, The United States Printing & Lithograph Co.; Ralph J. Wrenn, Stecher-Traung Lithograph Corp.; John B. Osborn, Forbes Lithograph Mfg. Co.; former director Everett F. Bowden, Forbes Lithograph Mfg. Co.; Harold A. Merten, The Strobridge Lithographing Co.; Milton E. Kingsley, The Providence Lithograph Co.; Charles H. Waldhauer, The United States Playing Card Co.; Curt Teich, Jr., Curt Teich & Co., Inc.; Vernon K. Evans, The Veritone Co.; and Robert L. Eger, LNA.

LNA Panel Looks at Web Offset

AMONG the many interesting and informative panels featured at the Lithographer's National Association convention in Phoenix last month was a discussion on "Web Offset—its Present and Future," under the chairmanship of LNA director Vernon K. Evans.

The panel, covered partially by *ML* last month, consisted of Olin Freedman, graphic arts consultant; Kenneth L. Wallace, Kimberly-Clark Corp., Neenah, Wisc.; and T. A. Dadisman, Printing Developments, Inc.

As a keynote to the discussion, Mr. Evans noted that "web offset is a mere youngster on the printing scene, but that web printing is a mighty giant, accounting for by far the greater volume of printing done on paper."

"Web offset has problems as does sheet-fed offset," he said, "but the biggest mental block for most of us is the finishing operations done right on the end of the press—our production, estimating and manufacturing departments which will resist this big step to a complete package at the end

of this machine. It's hard for sheet-fed people to accept the tempo of this change."

Mr. Freedman, who traced the advantages of web offset presses, said that "with all colors printed on both sides once through the press, fitting of colors is assured and quality, particularly dot structure, can compare favorably with the best sheet-fed results."

He pointed out however that it is impossible to start in the web press field on a modest scale because of the cost of presses and their low resale value.

Mr. Wallace presented the paper industry's views on web offset and reported that web presses in use are consuming in excess of 50,000 tons of coated paper per year—although the bulk of the total tonnage is still on uncoated stock.

In speaking of the higher cost of web offset paper as compared to letterpress, he said that "new materials are constantly being evaluated, but these, at least for the immediate future, do not hold enough promise to say with any assurance that price

and quality standardization is in the immediate offing."

Mr. Dadisman warned lithographers that "setting up your first roll-fed press, especially a multicolor press, could very easily become a catastrophe if plant owners fail to make a scientific analysis of the company's preparedness and fitness for the move."

To help the lithographer analyse his own position in contemplating such a move he presented the following check list: "Do present customers have the kind of work that warrants buying roll-fed equipment?; do they have additional work you can get if you had roll-fed equipment?; would you be putting too few, or too big, eggs in your capacity 'basket'?; would you have to go to new markets for the business?; and do you have the personnel, auxiliary equipment and space to adequately service such departures from your established operating methods?"

Before making such a step he urged plant owners to seriously reevaluate the firm's sales policies and to note the responsibility of "educating" the printing buyer instead of selling him.

"Every printing job possesses its own unique specifications that must

be diagnosed correctly or bedlam results. The permissible latitude for error is considerably narrower in roll-fed printing than it is in the sheet-fed category," he concluded.

Named Top Salesman

Vernon R. Vincent, advertising salesman for The Calvert Lithographing Co., Detroit, has been publicly selected as one of the top 20 salesmen in the Detroit area. He is the only winner in the graphic arts.

The contest, which is sponsored by the Detroit Sales Executives Club and the *Detroit Free Press*, ended May 5 with a banquet and the presentation of trophies to the winning salesmen.

Mr. Vincent, who was selected by advertising men and purchasing agents he comes in contact with, annually grosses \$500,000 to \$1,500,000 a year in sales. He was nominated by Edward A. Zdyb, Campbell-Ewald Co., because of his "knowledge, pleasant personality and ability to follow through and service his clients after the sale has been made."

Donates \$250,000 To Charity

John M. Wolff, vice president of the Southwestern division of Western Printing and Lithographing Co., St. Louis, has contributed \$250,000 for the building of a 64-bed addition to the Bethesda-Dilworth Memorial Home for Aged Women, St. Louis. The new building is to be named in honor of Mr. Wolff's wife and mother.

Mr. Wolff has long been known in graphic arts circles. He is a former president of Printing Industry of America and is currently active in the Education Council of the Graphic Arts Industry's national scholarship trust fund.

Announces Expansion Program

As part of a five-year expansion program, the O. B. Johnson Press of New York has been negotiating to buy a 15-acre site in Whippany, N. J.

Proposed plans call for the construction of a plant with 40,000 sq. ft. of floor space to be followed by two additions of 30,000 sq. ft. each. No date has been set for the construction.

Drupa Reviews Printing

VISITORS to Drupa, the International Fair for Print and Paper, at Dusseldorf, Germany last month, had an opportunity to see a panorama of printing that illustrated its development from its earliest beginnings up to the present day.

Printing in the past was reviewed with a series of exhibits that included ancient presses, old advertisements, postcard designs, bibles, antique seals and playing cards.

But, as reports filter back from the number of American printers and lithographers who made the pilgrimage, printing as it is today, and will be within the next few years, attracted the most attention.

Drupa exhibitors, 688 in all, provided a massive exhibition covering 775,000 sq. ft., which showed the latest developments ranging from printers utensils and paper goods to the largest presses and machines for the graphic arts.

The United States was represented by 14 exhibitors. West German firms dominated the fair however, with 498 companies showing their wares. Other countries represented were Switzerland with 42 exhibits; France, 38; England, 34; Italy, 21; Holland, 19; Austria, 8; Sweden, 7; Denmark, 2; and Australia, Belgium, Finland, Japan and Norway, 1 each.

Individual exhibits contained a

comprehensive range of printing and composing machines of all types, machinery for the paper and board converting industry, printed products, printing inks, paper and board products, raw materials and all accessories. Ways and means of printing synthetic materials were also demonstrated.

The giant fair attracted visitors from all over the world. In addition to the United States and Canada, most of the South American companies were represented. Reservations also were received from places such as South Africa, Ceylon, India, Pakistan, Hong Kong, Turkey, Yugoslavia and many others.

In summing up the purpose of the fair for a group of technical and trade journal representatives, Hubert H. A. Sternberg, president of the Drupa committee said, "The present exhibition, the third Drupa, is being held at a time when mankind is facing a new age of scientific development. The printing industry throughout the world contributes the means of expressing the ideas and progress of civilization in many ways. The printing industry, too, must keep abreast of new developments. Drupa demonstrates the progress already made and reveals the way in which latest inventions and innovations have been applied to new machinery, techniques and standards to meet the challenge of this modern age and the ever increasing demand for print."



Aerial View of Drupa Grounds.



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S & B Holds Open House

Snyder & Black, 415 Knollwood Road, White Plains, N. Y., held an open house last month to observe the completion of its move from 700 William St. in New York City.

Housed in a mammoth new building with 45,000 sq. ft. of plant space, 7,000 sq. ft. for paper storage and 16,000 sq. ft. of office space, the company still maintains a sales office in the city at the Coliseum building.

The company specializes in display work and is well known for the creation of novel merchandising ideas. It maintains an art department numbering between 20 and 25 persons.

Included among the equipment moved into the new plant were two 76" two-color, two 69" two-color and one 69" one-color Miehle offset presses. The move took three months.

The new plant, which is air-conditioned, has humidity control in the paper storage and press rooms.

Purchase Two-Color Presses

Harris-Seybold Co. has announced that the following lithographers have recently purchased two-color offset presses: Aldine Ptg. Co., Los Angeles; Glenn Ptg. Co., Kansas City, Mo.; The Hennegan Co., Cincinnati; and Inland Press, Milwaukee.

Local 22 Gets Raise

Lithographers Local 22, Los Angeles, has concluded negotiations with the owners of some 50 area shops after an eight-day strike.

Under the settlement, skilled workers get \$7.75 a week retroactive to Feb. 15 and \$5.50 a week next year; semi-skilled, \$6.25 retroactive and \$4.50 in 1959; and general workers \$5 for this year and \$4 next year.

To Hold Forum In Fall

A litho shop practice forum will be held in St. Louis this Fall under the sponsorship of the Graphic Arts Association. Among the subjects scheduled to be covered are paper and ink problems; surface and deep-etch platemaking; color measurement and masking; bi-metal and pre-sensitized plates; and instruments for control and standardization.



(l. r.) Gerald Walsh, Carey Dowd, John Doesburg and William Egan at Texas conference of printing management problems.

Topics Varied at Texas Meeting

A LOOK at production techniques, labor problems and "creative" selling was offered at the fifth annual Texas conference on printing management problems in San Antonio April 26 and 27.

A panel discussion on "Production Techniques for Greater Profits," pointed out that many things are often overlooked in the planning of production on any given job. Principal speaker was Stephen Bresk, The Rein Co., Houston. Panel members were James G. Lowdon, Exline-Lowdon Co., Dallas; W. B. Anderson, The Steck Co., Austin; Virgil Teter, Clemens Printing Co., Inc., San Antonio; D. Gordon Wiley, Stafford-Lowdon Co., Fort Worth; and E. L. Miller, Miller Printing Co., Amarillo.

"Managing Manpower for Greater Profits" was discussed by John Doesburg and Gerald A. Walsh from the standpoint of the non-union and union shop, respectively. Both men are with Printing Industry of America.

Following these talks the conference was divided into two sections, union and non-union, for additional discussion on the labor outlook for the future months and other problems confronting the plant operator.

Mendel Segal, Stein Printing Co., Atlanta, Ga., offered three basic solutions to the problem of price cutting. In his talk, "Selling for Greater Profits," he said that stabilized prices,

better equipment and "creative" selling would solve the problem.

Mr. Segal's topic also was covered by a panel consisting of George Taylor, Haughton Brothers, Dallas; Robert W. Welz, Carmax Corp., Houston; Michael Dodic, National Printing & Stationery, San Antonio; S. F. Higgins, Higgins Printing Co., Fort Worth; and Gus A. Becker, Becker Printing Co., Beaumont.

NYEPA Holds Annual Dinner

The New York Employing Printers Association held its annual dinner meeting on May 26, at the Hotel Commodore. Guest speaker for the event was Dr. Henry A. Kissinger, director of special studies for the Rockefeller Brothers Fund.

Dr. Kissinger discussed and answered questions on the subjects of guided missiles, nuclear weapons and their effect on national defense and foreign policy.

Completes Expansion Program

Beck Offset Plate Co., 816 Arch St., Philadelphia, has completed an expansion and remodeling program. An entire floor has been added to provide more comfortable working conditions for employes and to permit a more efficient plant layout. The stripping department has been enlarged to three times its former size.



8

big reasons for switching to CRONAR*

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You'll be glad you switched to "Cronar," especially at these competitive prices. Ask your Du Pont Technical Representative for a demonstration, or write: E. I. du Pont de Nemours & Co. (Inc.), Photo Products Department, Wilmington 98, Delaware. In Canada: Du Pont Company of Canada (1956) Limited, Toronto.

* Du Pont's trademark for its polyester graphic arts films.

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Asian Printers Attend RIT

Representatives of the Korean and Indonesian governments are currently taking graphic arts courses at the Rochester Institute of Technology under the International Cooperation Administration.

Both men, who are with their respective government's printing offices, are here to learn about recent advances in the graphic arts so that they can improve printing methods in their homelands.

Chang Soo Choi of Seoul, Korea who is the manager of the Korean government's text book printing plant, is also engaged in a special training course concentrated on technical subjects in and related to the graphic arts. One of his ambitions is to carry modern American educational methods to Korea and set up a program to train future Korean printers.

Mohamad Sani, Djakarta, Indonesia, who is an administrative supervisor in his government's printing office, plans to attend RIT for one semester and then study operations at a typical commercial printing plant in New York.



Mohamad Sani of Indonesia and Chang Soo Choi of Korea, who are taking special printing courses at RIT, study conversion processes in the graphic arts department relief plate laboratory. Both men represent their government's printing offices.

bilities. Tests have shown, he said, that plates made with this copolymer surface plate coating solution have excellent background desensitization without etching or gumming.

They print images of superior quality, he reported, and have a good storage life of three weeks or better. However, he pointed out, they have very low light sensitivity and are susceptible to rapid blinding on the press.

George W. Jorgensen, supervisor of the physics and quality division, reported on LTF's first quality control survey. He said that the following conclusions were made from the survey: 1. Most plants rely on the foreman to maintain quality standards though many now have separate quality control departments; 2. The pressroom appears to be the main concern for quality control; 3. Many plants are planning to add either a quality control department or quality control personnel to each production department; 4. Most members expressed an interest in a cooperative quality control research program with LTF.

A report on color reproduction studies was presented by Frank M. Preucil, supervisor of the Foundation's photographic division. He summarized LTF's color reproduction

studies in 1957 which included practical tests of the balance of specially formulated process inks.

Results of the tests indicated, he said, that single stage masking can give complete correction of primary and secondary color ink errors when these inks have been balanced to the filters and the color temperatures of the lights used.

The other reports were on aluminum deep-etch plate studies; ink absorption and effects of plasticizers on rubber used for lithographic blankets; print quality in lithography; multicolor press problems, especially in the area of trapping and dot spread; hygrometer studies; the gloss of offset inks and its relationship to the gloss and absorptivity of paper; tinting and ink emulsification; and inkometer studies.

Other members of the LTF staff who participated in the program were Charles Borchers, William Lyon and Everett Bernstein.

3M Elects 3 New VP's

Maynard H. Patterson, Robert W. Mueller and Lyle H. Fisher were elected vice presidents of the Minnesota Mining & Manufacturing Co., at a meeting of the board of directors on May 14. The board also elected Harold F. Larson assistant treasurer.

12 Reports At LTF Annual Mtg.

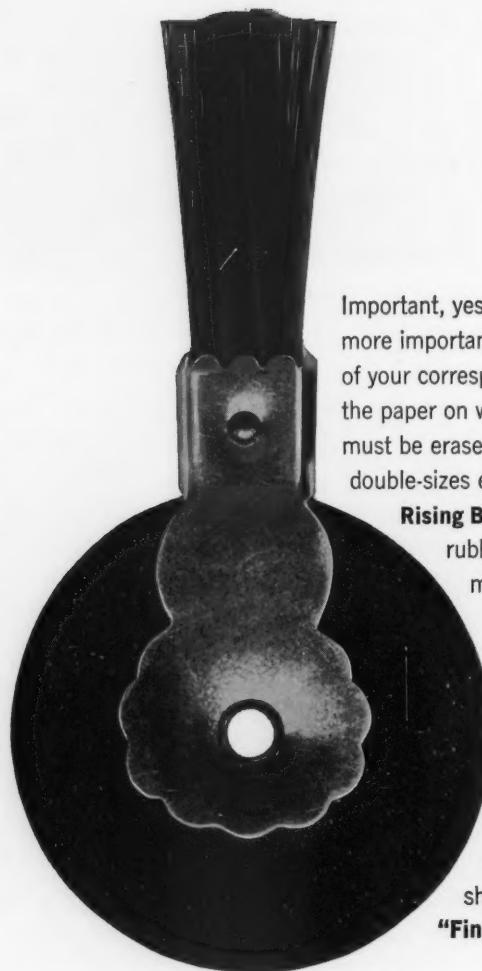
THE Lithographic Technical

Foundation's research committee held its regular annual meeting on April 23 and 24, at the Conrad Hilton Hotel in Chicago. The meeting was attended by some 100 technical men in the lithographic industry from all parts of the country.

U. G. Colson, chairman of the LTF research committee presided at the meeting which was conducted by Michael H. Bruno, research manager, and his staff.

Except for one closed session which dealt with possible new projects and priority adjustments on current projects, the meeting centered on 12 illustrated reports on the progress of each of the Foundation's active research projects.

Charles Gramlich, supervisor, metals and surface chemistry division, presented a report which showed that preliminary research on PVMMA as a substitute for gum arabic in deep-etch coatings has shown good possi-



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B & B Earnings Up

Stockholders of Brown & Bigelow, St. Paul, were told at their annual meeting last month that the company



Van Keuren



Day

has managed to show a seven percent increase in earnings despite lower total shipments.

Charles A. Ward, in reporting the facts to the stockholders, said that new earnings for the first quarter of this year were \$643,000 or 51 cents a share compared to 44 cents a share for the same period in 1957.

Mr. Ward was unanimously re-elected president and general sales manager. F. O. Van Keuren was elected vice president of sales administration and E. C. Day vice president in charge of labor relations.

Mr. Van Keuren, who has been with B & B since 1918, has held various sales posts with the firm and was formerly a vice president of Western Lithograph Co., Los Angeles, a Brown & Bigelow subsidiary.

Mr. Day joined the company 23 years ago and since 1938 has been in the labor relations division, which he has headed for the past several years.

He is in charge of union negotiations and has helped develop the company's safety, medical and foremen's training program.

Company directors voted a regular dividend of 25 cents a share for the 42nd consecutive time.

Another Switch To Offset

The *Miami Valley Dairyman*, house organ of the Miami Valley Milk Producers Association, Dayton, O., has switched to offset after a sample survey of its readers overwhelmingly approved.

Before making the change, Doris Copenhefer, the editor, had a trial issue printed by offset and distributed

to 60 readers. She then asked them three questions: Is it easier to read? Are the pictures clear? Do you prefer the new look?

Only one out of the 60 said "no" to the questions, while 55 gave a definite "yes" and four were unsure.

The fact that printing by offset was about 20 percent cheaper than letterpress was "too much for an editor on a budget to overlook," Miss Copenhefer said. She also commented that color can be used and this has strengthened the appreciation her readers have for offset. One farmer reader commented that "it's much less stodgy appearing than formerly."

GA Educators Meet

Personnel and training directors from 30 graphic arts industry plants met recently at Carnegie Institute of Technology to discuss and plan programs for the education and training of apprentices in their plants and the industry.

Two of the important conclusions reached at the meeting were apprenticeship training in the industry is probably more of a fiction than a fact in terms of organized programs, and the industry's future manpower must have a broader education in the physical and social sciences.

The program was conducted by Leslie Shomo, National Publishing Co., Washington, D. C., vice president of the Education Council of the Graphic Arts Industry.

Attempts To Ban Billboards

Plans are being readied in Chicago for a campaign to banish certain types of billboards from that city's show street, Michigan Ave., and along State Street in the downtown retail shopping district. Directing the drive is a businessmen's group, the Greater North Michigan Ave. Association, which has announced that it intends to push for elimination of all billboards in the specified area after a 5-year amortization period. In a recent clash at a city council meeting, a representative of General Outdoor Advertising told the spokesman for the businessmen's association, "We will fight you tooth and nail."

R. Hoe Wins APRA Award

R. Hoe & Co., has received a certificate of achievement from the American Public Relations Association for "an outstanding program in public relations during 1957." The award was presented to Joseph L. Auer, president of the company, at a dinner during the association's annual convention in New York last month.

The presentation to Hoe is the first time in the 14-year history of the awards that a manufacturer of graphic arts equipment has been honored by the association. Hoe was chosen as a result of its activities in promoting newspapers as an advertising medium, and specifically for making its ROP Color Fashion Show and its motion picture, "Color Sells Everything," available to newspapers as advertising promotion tools.

New Press For Cuneo

Wisconsin Cuneo Press, Inc., Milwaukee, Wis., an affiliate of the Cuneo Press, Chicago, recently completed installation of a newly purchased Harris No. 107, 2-color offset press. According to the company's house organ, *Cuneo Topics*, this is one of the first ten of this particular model to be erected in a U. S. plant. As described in the article, it takes a 25 $\frac{3}{4}$ x 38 $\frac{1}{2}$ " sheet, is equipped with Baldwin ink fountain agitators and water fountain leveler. It has the new underfed roll mechanism and will deliver between 4,000 and 7,000 printed sheets per hour.

Installs Giant Enlarger

A giant-size enlarger, said to be the first unit of its kind built, has been installed by the Color Corp. of America, New York. The company reports that it is being used to produce "the world's largest color prints and color transparencies for advertising and exhibit purposes."

Built by the Caesar Manufacturing Co., the machine, with an exposure time of less than two minutes, can produce enlargements of 3-1/3 x 20' from a small section of an 8 x 10" color negative or transparency.

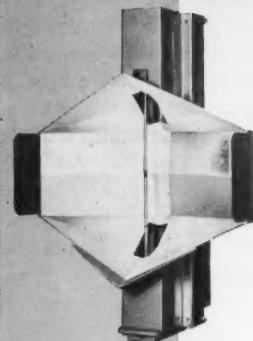


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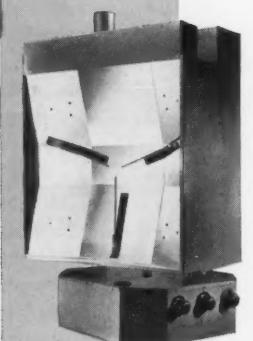
FULLY AUTOMATIC

High Intensity Arc Lamps



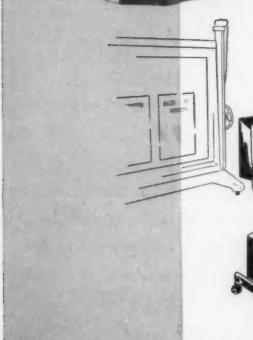
GRAFARC CHALLENGER 75 and 110 AMPERE HIGH INTENSITY CAMERA ARC LAMP

Permits accurate exposures of as short as 5 seconds. Accurate density control regardless of line voltage variations. Constant color temperatures. When lamp is energized the dual function motor instantly advances the carbons, strikes the arc, establishes correct gap length, and feeds the carbons so as to maintain the proper gap.



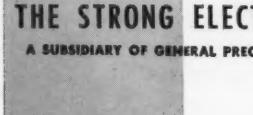
GRAFARC 140 AMPERE HIGH INTENSITY ARC PRINTING LAMP For Use With PRINTING FRAMES 40" x 50" AND LARGER

Twice as powerful as the average printing lamp, this lamp cuts exposure time in half. Uniform light coverage is provided, illumination variables entirely eliminated. Models for Monotype Huebner MH photo composing machines assure precise control of intensity for accurate repeats.



TRI-POWER THREE PHASE HIGH INTENSITY ARC PRINTING LAMP For Use With PRINTING FRAMES 50" x 70" AND LARGER

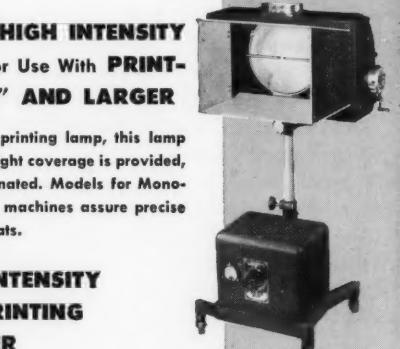
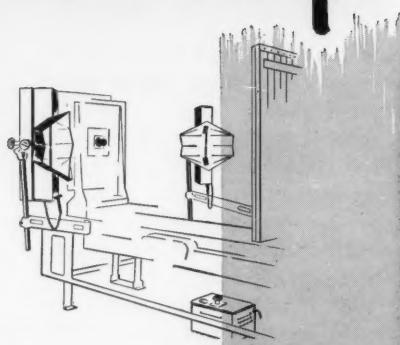
Burns a trim of three carbons to produce a single light source three times as powerful as the 140 ampere Grafarc. Dual function motor automatically compensates for any variables in the carbon burning rate. Permits accurate compensation for line voltage changes. Blower exhausts gases.



GRAFARC 95 AMPERE HIGH INTENSITY ARC PRINTING LAMP For Use With PRINTING FRAMES UNDER 40" x 50"

As with the 140 ampere printing lamp, overhead models are available for use with horizontal printing frames. They burn in normal position, thus avoiding smoking of the reflector and preventing ash from depositing on surfaces in the light path.

See your dealer or send for literature.



THE STRONG ELECTRIC CORPORATION
A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION
17 CITY PARK AVENUE
TOLEDO 1, OHIO



New Chairman For NW Paper

At the annual meeting of the board of directors of the Northwest Paper Co., Cloquet, Minn., on May 7, John



John M. Musser

M. Musser of St. Paul was elected chairman of the board. Frederick K. Weyerhaeuser, chairman since 1936, was relieved of the post at his own request, but will continue as a member of the board.

Mr. Musser has been a director of the company and a member of the executive committee since 1936. He is also chairman of the board of Weyerhaeuser Sales Co., St. Paul.

All company officers were re-elected. They are Mr. Kendall, president; Mace V. Harris, Bernard W. McEachern and Roy I. Nilson, vice presidents; Albin R. Boquist, Treasurer; Lloyd N. Benson, secretary; Clarence W. Jensen, assistant treasurer; and William M. MacConnachie, Jr., assistant secretary.

Holds Sales Seminar

Charles LaBlanc, director of special services for the Research Institute of America, held a sales training seminar May 26-28 for the printing industry in St. Louis. Sponsored by the St. Louis Graphic Arts Association, the seminar included 13 different topics.

Guide Printer Marks 10th Year

The Springdale division of American Aviation Publications, Inc., is celebrating its 10th anniversary this year. The company, headed by Jay Schuler, publishes a 500-page airlines

guide which is a compendium of schedules, fares and other information on 34 commercial airlines.

The firm is presently awaiting the arrival of a large web-offset press which will speed the printing of the guide, published twice a month.

Electronic brains designed and manufactured by International Business Machine are used to keep abreast of the hundreds of schedule changes.

Poster Annual Distributed

The 1957 Poster Annual, containing selected designs in the poster and painted display medium, was distributed late last month by Outdoor Advertising, Inc.

The Annual features the three Grand Award Medal winners at this year's annual competition of outdoor advertising art sponsored by the Art Directors Club of Chicago. Also included are the first, second and third prize winners in 17 classifications, included the painted display medium.

In addition the book contains a number of honorable mention designs, making a total of 163 poster and painted display illustrations.

Di-Noc Acquires Cramer

Di-Noc Chemical Arts, Inc., Cleveland, has announced the purchase of the G. Cramer Dry Plate Co., St. Louis, producer of glass plates and films for the graphic arts.

The Cramer company will continue to operate as a separate entity under the name of Cramer Dry Plate & Film Co., a subsidiary of Di-Noc Chemical Arts, Inc. The Cramer marketing organization remains virtually unchanged, with the home office in St. Louis and branches in New York and Chicago. In addition, Di-Noc products will be handled through Cramer sales outlets on a dealer basis.

New Post For Haffner

Charles C. Haffner, Jr., chairman of the board and chief executive officer, R. R. Donnelley & Sons Co., Chicago, has been elected to the board of directors of the U. S. Chamber of Commerce. Mr. Haffner will represent the Chamber's construction and civic development division.

New Rutherford Vice President

Michael Annick has been appointed vice president of the Rutherford Machinery Co. division of the Sun



Michael Annick

Chemical Corp., Rutherford, N. J. The announcement was made by J. S. Thome, Sun vice president.

Mr. Annick, who joined the company in 1938, rose through the sales organization and was general manager of Rutherford at the time of his promotion.

Sun also announced the appointment of Jackson D. Stafford to general manager of the Pacific Coast division of General Printing Ink; and Arthur E. Loveland to vice president of General Printing Ink Corp. of Canada, Ltd.

Named Recorder V.P.

Myron Wacholder has been named a vice president of the Recorder Printing & Publishing Co., San Francisco. He will continue as general sales manager. He has been with Recorder and companies it absorbed since 1935.

New Name for Dulfer

A new name, E. J. Cardinal Lithograph Co., has been taken by the Alex Dulfer Lithographing Co. of San Francisco, which was purchased from the Dulfer family by E. J. Cardinal and associates two years ago.

New Litho Firm

Wray & Co. is the name of a new San Francisco lithographic firm established at 676 Montgomery St. by W. J. Wray. It will stress high quality small offset press work.

Named Offset Supervisor

Warren W. Woolcott has been named offset pressroom supervisor at the Keller-Crescent Co., Evansville, Ind. He succeeds Oscar Diehl who retired April 4, after 22 years with the 72-year old company. Prior to this appointment he was offset supervisor for Southern Lithographing, Orlando, Fla. Mr. Woolcott began his career in lithography at the age of 16 with R. R. Donnelley & Sons Co. He was with that company 17 years, and left it in 1954 as a four-color pressman.



200 Printing Executives Meet

MORE than 200 printing executives gathered at the Carnegie Institute of Technology School of Printing Management in Pittsburgh late in April, for a series of seminars and management conferences. The seminars included talks by graphic arts experts, questions and answers, panel discussions and films.

Speakers included Robert O. Ferguson of H. B. Maynard and Co., Pittsburgh; Harry L. Waddell, McGraw-Hill Publishing Co., New York; R. E. Fisher, Printing Developments, Inc.; Mendel Segal, Stein Printing Co., Atlanta, Ga.; C. Wilson Randle of Booz, Allen & Hamilton, Chicago; J. W. Rockefeller, Jr.; of the company bearing his name; and Stanley T. Kaye, Herbig and Held Printing Co., Pittsburgh.

Mr. Fisher, in a talk on "Recent Developments in the Graphic Arts," said that the time has come when at every level in the graphic arts we must delegate to the past the "horse and buggy approach" in printing technology and production.

He pointed out that more and more money and effort are being spent by more capable people to develop improved tools and methods for the production of better and high speed printing. He predicted however, that this new equipment would be more expensive than present equipment, possibly three to six times more expensive.

As examples, he described several recent developments including phototypesetters, electronic color scanners, and bi-metal plates.

Mr. Rockefeller, in a talk on "A New Approach To Printing," cited

the printing industry for the rapid strides it has made within the past few years. He said, "an industry which for decades remained virtually static has suddenly become one of the most dynamic in America offering a stirring challenge to the best brains of our generation."

PXA Lamp Demonstrated

A new lamp, called the PXA, was introduced to the lithographic industry at a special showing in the Belmont Plaza Hotel, New York, May 27.

The lamp was developed by General Electric's Photo Lamp department and the American Speedlight Corp. It combines GE's new pulsed xenon arc lamp and the Ascorlux lighting equipment.

It is intended as a new light source which promises substantial savings in power and provides advantages in low maintenance costs, absence of heat, a completely stabilized light output and instant starting.

The new product is the result of 10 years research effort to apply electronic flash to graphic arts applications. It is stated that it will enable results not possible with previous strobe lights.

The PXA lamp is a tubular quartz lamp less than $\frac{1}{2}$ " in diameter, in lengths ranging from 3 to 36". Wattage ranges from 300 to 3000 watts.

It can be used to illuminate the copyboard and for transillumination. (See *Photo Clinic* next month for a complete technical discussion.)

James Rudisill Dies

James Rudisill, president of Rudisill & Co., Lancaster, Pa., died late in

May. A well known figure in the lithographic industry, he was a former president of Printing Industry of America.

Ault Award To Deeney

James J. Deeney, co-founder of Bensing Bros. & Deeney, a subsidiary of the Sun Chemical Corp., has been awarded the 1958 Ault award for his contributions to flexographic printing.

The presentation was made by Dr. J. C. Warner, president of Carnegie Institute of Technology, during the 44th annual meeting of the National Association of Printing Ink Makers, May 19-21, at Bedford Springs, Pa.

Mr. Deeney was specifically cited for originating the first commercially acceptable pigmented ink for the flexographic process. He is the fifth person to receive the award, donated by Bromwell Ault, vice president of Interchemical Corp., for outstanding achievements in the printing ink field.

Robertson Expands

Robertson Photo-Mechanix, Inc., is constructing an addition to its Chicago plant at 7440 W. Lawrence Ave. The new structure will be a one-story building of brick and glass with about 60,000 sq. ft. of space. Cost will be between \$150,000 and \$200,000, according to Leonard S. Florschheim, Jr., president.

"STREAMLINING YOUR PLANT LAYOUT" was the subject of the May 14 meeting of the Cleveland Club of Printing House Craftsmen. Christopher Foss, American Type Founders, was the principal speaker.

Month-by-month index figures on sales of the commercial printing and lithographic industry in the New York metropolitan area, using monthly sales for the two years 1955-1956 as the base. As noted by the New York Employing Printers Association, the figure for April '58 indicates a seven percent drop from the same month last year.

	1957	1958
JANUARY	105.78	104.85
FEBRUARY	98.85	92.89
MARCH	122.81	111.99
APRIL	120.79	112.34

*There are two sides
to label paper performance . . .*

M-J Printability and



The Spot-Breasted Oriole, brilliant newcomer to the Miami area, formerly seen only in Central America.

Send for free 9" x 12" reprint suitable for framing.

... the sign of the most complete label line

LUDLOW PAPERS, INC.

Fine Papers Division

Brookfield, Massachusetts



Printed by offset on M-J 518 YELLOW, one of more than 100 fine papers in the M-J Label Paper Line, with Graphic-Color inks.

...M-J Stickability

*M-J 518 Yellow gives you
perfect gummings for perfect performance —*



*Only M-J gives you perfect performance
on both sides of the label*

Water Soluble Adhesives

Just wet and set on the surface desired. Dextrine, animal and specialty glues for adhesion to china, glass, paper, leather, rubber, porcelain, wood, fabric, masonite, plastic, and other surfaces.

Heat Seal Adhesives

ON! . . . in an instant — sticks forever. Your "old faithful" for the moisture-proof surfaces of today's modern packaging — cellophane, saran, paper board, glassine, most textiles and fabrics.

Dry-Stik Adhesives

No moistening — just peel off the protective backing. Sticks to most clean, dry, hard, smooth surfaces — glass, porcelain, baked enamel, wood, chrome, stainless steel, aluminum, most plastics.

these other famous M-J label surfaces
UNCOATED WHITES COLORED MEDIUMS
COATED WHITES COLORED PLATEDS
SPECIALTY PAPERS

this wide selection of M-J gummings
WATER SOLUBLE—All the standard Dextrine and Animal glues, plus Peelable, Tropical and other specialty gummings.

HEAT SEAL DRY STIK



... the sign of the most complete label line

LUDLOW PAPERS, INC.

Fine Papers Division
Brookfield, Massachusetts

Breath-taking fidelity with four colors on paper

Coated paper using Dow Latex offers improved dimensional stability, better ink hold-out and reduced water sensitivity. These features mean sharper printing and fracture-free folding which assures customers of highest quality coated stock at reasonable cost.



DOW



Authentic Civil War mementos courtesy the Henry Ford Museum



The pre-Civil War period was one of flamboyant and decorative elegance as is indicated by the illustration. Notice how the delicate tones and colors faithfully reproduce on coated paper using Dow Latex. In this instance, 80-lb. off-machine coated, gloss offset paper was used. A careful examination will show why only Dow Latex provides such an excellent printing surface.

For fine quality reproduction, specify latex coated papers

A coated paper using Dow Latex offers dramatic improvements to the printing surface of all grades of papers. It assures a clean, uniform sheet which is highly compatible to both offset and letterpress inks.

Printers prefer coated paper with Dow Latex because they know it has the qualities which will assure sharp, clear reproduction every time. And, paper manufacturers and converters find Dow Latex reduces production costs without sacrificing quality.

Major paper manufacturers are now offering a wide range of quality coated papers made with Dow Latex. They use it for machine and off-machine coating for both dull and gloss grades. For more detailed information on coated paper using Dow Latex, check your paper supplier or write THE DOW CHEMICAL COMPANY, Midland, Michigan, Coatings Sales Dept. 2158.

YOU CAN DEPEND ON





Doesn't color reproduce better on Maxwell Offset?

Howard Paper Mills, Inc. / MAXWELL PAPER COMPANY DIVISION / Franklin, Ohio

We'd be pleased to send you samples of our eight finishes and two tints

Printed on Maxwell Offset—Basis 80—Maxtone finish

COLOR PHOTOGRAPH BY ANTON BRUEHL





COLOR PHOTOGRAPH BY ANTON BRUEHL

Are you shaving too closely on letterheads?

A GOOD LETTERHEAD PAPER *and* its envelope cost just about a half-cent more than a poor letterhead and envelope.

Saving that half-cent loses all the extra values you get in HOWARD BOND. Its immaculate whiteness. Its crisp feel. Its business-like crackle. Its ability to bring to your letters a *marked* improvement in appearance and in the respect with which they are received.

Don't cheapen the image your letterhead creates. What you pay for HOWARD BOND is money mighty well invested.

Your paper merchant or favorite printer will show you samples of HOWARD BOND in whitest white and in attractive colors, too.

Printers! This message appears in advertising magazines read by your customers.

HOWARD PAPER MILLS, INC. • HOWARD PAPER COMPANY DIVISION, URBANA, OHIO

Howard Bond

"The Nation's

Business Paper"

Companion Lines: Howard Ledger • Howard Mimeograph

Howard Duplicator • Howard Posting Ledger

Printed on Maxwell Offset



Basis 80—Maxtone finish

Web Section Plans Tours, Panels

THE 1958 annual meeting of the Web Offset Section of Printing Industry of America June 5 and 6, will feature several panel discussions and tours of the Rand McNally & Co. and Western Printing & Lithographing company plants.

Members of the section and their guests, meeting at Chicago's Edgewater Beach Hotel, will attend a panel discussion on "Web Offset Sales and Related Problems" the first morning.

Donald R. French, Danner Press of Canton, Inc., Canton, O., and president of the Web Offset Section, will be the chairman of the panel.

Leader of the discussion will be the keynote speaker, Winfred R. Isom, vice president of R. R. Donnelley & Sons, Crawfordsville, Ind. The other panel members are James S. Armitage, president of Inland Press, Chicago; and Carl Denman, vice president of the World Color Printing Co., St. Louis.

Panel auditors will be R. C. Fields, plant superintendent, R. R. Donnelley & Sons; and Charles Rosenfelder, superintendent of the same company's offset department.

Following an executive session for the election of officers, with Mr. French presiding and presenting the annual president's report, members will gather for lunch. Chairman for the lunch will be Houston Gray, Des Moines Register and Tribune Co., who is on the section's executive committee. The speaker will be James Low of the NAM Speakers Bureau who will talk on the "Prescription for Good Leadership."

A report on the highlights of DRUPA 1958 is scheduled for the dinner meeting on the first day. Chairman will be Hyman Safran of the Safran Printing Co., Detroit.

Reporting on and evaluating some of the new machinery and processes they saw at Dusseldorf will be Bernard Green, Majestic Press, Philadelphia; James N. Johnson, The Standard Publishing Co., Cincinnati; and Paul Lyle, Western Printing & Lithographing Co., Racine.

"Web Offset Equipment—A Comparative Evaluation", will be the subject of a panel discussion at an executive session on Friday morning. Chairman of the meeting will be Mr. Johnson. Panel Members will be Mr. French; Kenneth B. Haynes, Haynes Lithograph Co., Rockville, Md.; and Jack Spencer, Western Printing & Lithographing Co.

Craftsmen Convention

The 39th annual convention of the International Association of Printing House Craftsmen, Inc., will be held Aug. 13 at the Statler Hotel in Detroit.

Clement Buys New Plant

The J. W. Clement Co., Buffalo, N. Y., has purchased the Fullerton Ave. plant in Chicago of the American Color type Co. The price was not disclosed.

The Chicago plant will be operated as a Clement subsidiary under the name of Clement Colorype Inc., with a work force of about 500. The plant is equipped for color printing of national publications and commercial printing by both letterpress and offset lithography.

Root Named Hunt Ad. Mgr.

Rupert A. Root has been appointed advertising manager of the Philip A. Hunt Co. Prior to this appointment, he was product sales manager for the graphic arts.

3M Competition Winners Picked in Atlanta

The ten winners in the first quarter 1958 Excellence of Lithography Competition sponsored by the Minnesota Mining and Manufacturing Co., were selected in Atlanta, Ga., recently.

The winners, picked from 1,000 entries, are Commercial Printing & Letter Service, Dallas; Jahn-Tyler, Printing and Lithographing Co., Phoenix;

nix; Wimmer Brothers, Memphis; Capper Engraving Co., Knoxville, Tenn.; Royal Blue Print Co., Belmont, Cal.; Short Run Color Corp., Cleveland; Clay Printing Co., Hickory, N. C.; Brown & Cady Printing Co., Long Beach, Cal.; Ashby, Inc., Erie, Pa.; and Lithokraft Press, Ltd., Calgary, Alberta, Canada.

Judges for 3M's first quarter Excellence of Lithography Competition selecting winners in Atlanta, Ga., recently. (l-r.) Gerald H. Lytle, Pressmen's Home, Tenn.; Henry C. Daniel, Atlanta Litho Club; and (kneeling) George F. Longino, Jr., Printing Industry of Atlanta, Inc.



SAFETY INKS

by

SIEBOLD

FIRST CHOICE for backgrounds and Pantographic designs.
INDISPENSABLE in printing Checks, Bonds, Financial Documents.

These high quality, dependable inks are available in a choice of 17 colors. Their safety factors have been proven over the years of use in printing checks "by the millions".

Where safety is a watchword, Siebold Safety Inks are "first choice" and the safety factor remains intact for years to come. Send for our color sample book.



MEMBER: Lithographic Technical Foundation
National Association of Photo Lithographers

"OVER 75 YEARS OF SERVICE"

National Association of Printing-Ink Makers
National Printing-Ink Research Association
N. Y. Employing Printers Association.

J. H. & G. B.

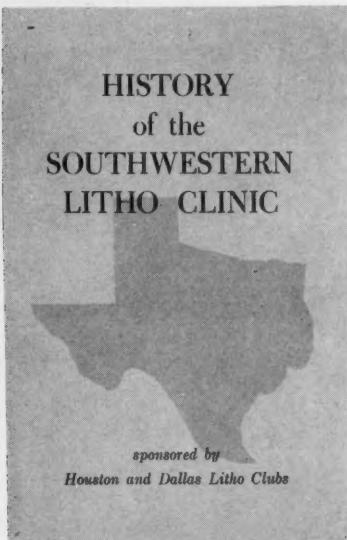
SIEBOLD
inc.

150 VARICK STREET, NEW YORK 13, N. Y.

EVERYTHING FOR THE LITHOGRAPHER • MANUFACTURERS OF PRINTING, LITHOGRAPHIC INKS AND SUPPLIES

To Offer Five Clinics In One

Five technical clinics will be held simultaneously during the eighth annual Southwest Litho Clinic sched-



uled for June 20-22 at the Rice Hotel in Dallas.

Lithographers may have their choice of attending sessions on either camera, stripping, plates, large presses, small presses, or various combinations of

each. Each clinic will be divided into four parts.

The four sessions on camera will be divided between fundamentals, half-tones, dark-room techniques and color. The stripping clinic will cover fundamentals, pin register, contacts and imposition. Those interested in up-to-date information on plates can sit in on sessions covering surface, deep-etch, bi-metal or pre-sensitized plates.

The large press clinic will cover chemistry, paper and blankets, inks and various problems lithographers might encounter; while the small press one will devote its time to make-ready, ink and paper, plates and blankets and three color.

The booklet pictured above, explaining the history of clinic, was distributed at the recent National Association of Litho Clubs convention in Washington.

A panel discussion will be held Sunday morning to answer individual questions.

Additional information or registration cards may be obtained from Kenneth Joseph, Box 6384, Houston.

New Developments Discussed At Forum

BECAUSE of many new developments and procedures, lithography is advancing into fields that never before were thought possible for this segment of the graphic arts industry."

This statement was voiced by Michael H. Bruno, research manager of the Lithographic Technical Foundation during a recent forum in Cincinnati.

This was the fifth presentation of the LTF filmed technical forum which, Mr. Bruno said, has been found to be the most effective means of "getting down to fundamentals" in forum presentations. He added that the fine attendance of 400 lithographers "indicated interest in doing better jobs at less cost. This, of course, is the most important factor in the tremendous growth of lithography."

The forum was opened with a brief welcome talk by Harold Merten, Jr.,

president of the Miami Valley Lithographers Association, the forum sponsor, and Andrew Donaldson, LTF president.

In a "Crystal Ball" summation, Mr. Bruno described numerous new devices and procedures which, he said, "indicate a rosy future for lithography." These included simplified and improved electrostatic plates, larger presensitized plates, development of better inks and new methods of dampening plates along with the elimination of water droplets.

In another talk, Mr. Bruno discussed bi-metal and other plates, and pointed out the possibilities for better results in numerous types of lithographing work by use of these plates. He said that as many as 11 million impressions have been printed from a single bi-metal plate.

In a talk on "Seeing Light and Color," by Frank Preucil, supervisor of the LTF photographic and color

division, the problems of color separation, masking and reproduction were discussed.

Six color films with sound tracks were shown at the forum. They were "How to Make Better Halftones," "How to Make Better Surface Plates," "Paper Troubles on the Press," "Avoiding Trouble with Ink," "Deep-Etch Platemaking," and "Handling Plates on the Press."

The forum was concluded with a question and answer period conducted by Mr. Bruno and Robert F. Reed, first LTF research director. Mr. Reed was with LTF from 1925 until 1944, when the laboratory was moved from Cincinnati to Chicago. He is now a research consultant with the organization.

Packaging Show in August

More than 80 percent of the exhibit space for the Western Packaging and Materials Handling Exposition, scheduled for Aug. 11-13 in San Francisco's civic auditorium, has been sold, according to Clapp & Poliak, producers of the show.

It is reported that hundreds of new developments in the packaging and materials handling fields will be on display, with many demonstrations including working models in action.

Registration forms are available from Clapp & Poliak, Inc., 759 Monadnock Bldg., San Francisco; or 341 Madison Ave., New York.

Exhibit Marks 25th Year

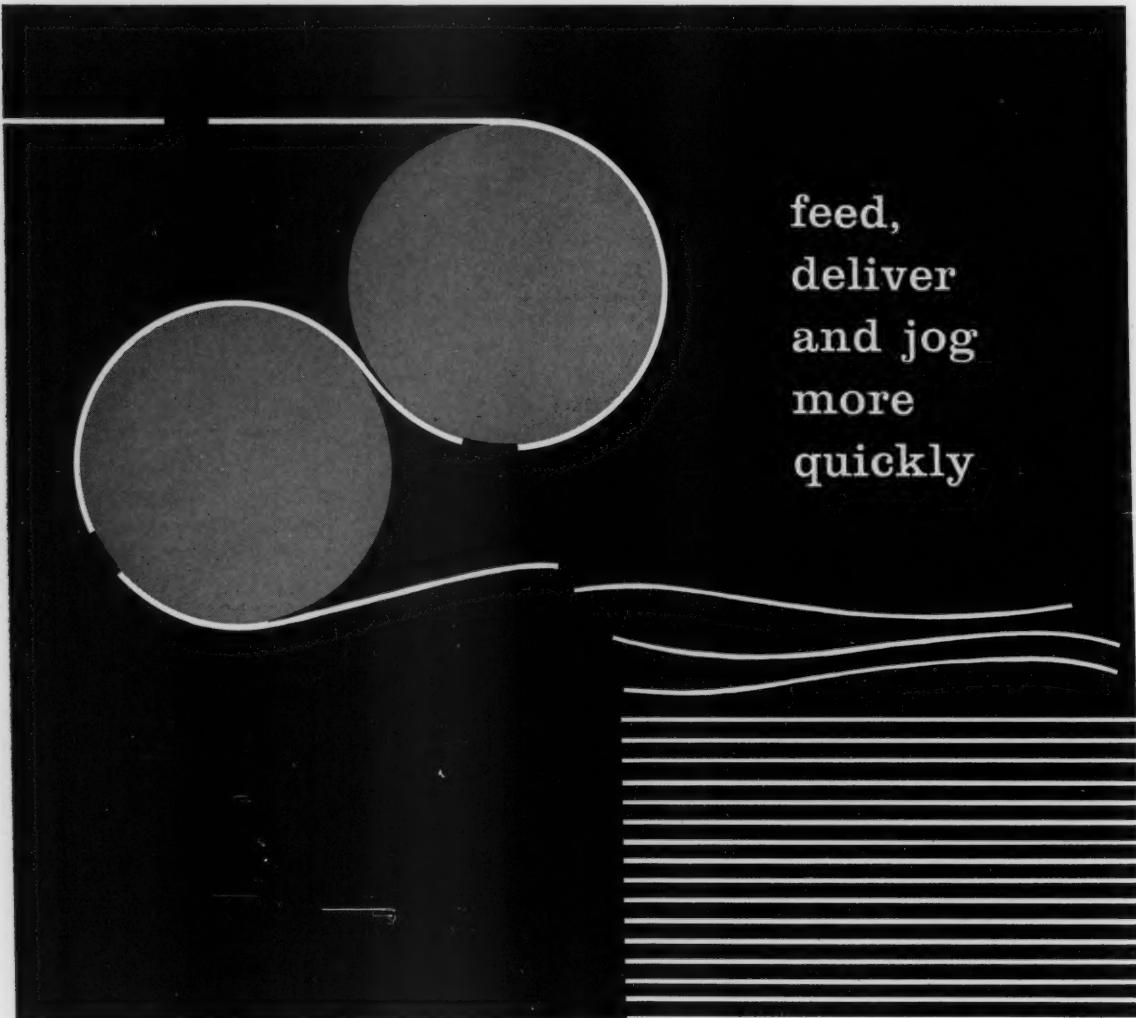
To celebrate its 25th anniversary, the Canadian Society of Graphic Arts is holding an exhibition of graphic works in the Toronto Art Gallery. The exhibit includes lithographs, etchings, linecuts and charcoal, pastel and ink drawings.

Named Envelope Co. Head

D. C. Mathews has been elected president of the Quality Park Envelope Co., St. Paul. He has been executive vice president of the company for the past two years and also is president of the Quality Park Box Co.

He succeeds L. H. Wasley who was elected chairman of the board.

Trojan 3D gummed printing papers



feed,
deliver
and jog
more
quickly

Here at last is a gummed paper that permits printing at the same rate as unguammed paper! Reason: 3D—a new method of processing developed exclusively for the Trojan line. It gives these papers complete dimensional stability . . . makes them lie perfectly flat even under adverse humidity conditions.

Trojan Gummed Papers take ink exceptionally well, too. You'll find colors spring to life . . . black-and-whites bounce with vividness.

Try Trojan 3D Gummed Papers on your own printing presses. One run should convince you it pays! Write today for free sample sheets to: Dept. ML-658, The Gummed Products Company, Troy, Ohio.

The Gummed Products Company

Troy, Ohio • Subsidiary of St. Regis Paper Company



LNA Convention Hosts

The following are companies who contributed to the suppliers social activities committee at the Lithographers National Association convention in Phoenix April 28-May 1.

American Roller Co., Chicago
American Type Founders Co., Inc., Elizabeth, N. J.
Russell Ernest Baum, Inc., Philadelphia
Bingham Brothers Co., New York
Samuel Bingham's Son Mfg. Co., Chicago
Bridgeport Engravers Supply Co., Bridgeport, Conn.
California Ink Co., San Francisco
The Martin Cantine Co., Saugerties, N. Y.
Champion Paper & Fibre Co., Hamilton, Ohio
Chicago Litho Plate Graining Co., Inc., Chicago
Crescent Ink & Color Co. of Pa., Philadelphia
Curtis Paper Co., Newark, Del.
The Dayton Rubber Co., Dayton, Ohio
E. I. duPont de Nemours & Co., Wilmington, Del.
Eastman Kodak Co., Graphic Arts Div., Rochester, N. Y.
Howard Flint Ink Co., Detroit
William Gegenheimer Co., Inc., Brooklyn, N. Y.
Gaetjens, Berger & Wirth, Inc., Brooklyn, N. Y.
Gilbert Paper Co., Menasha, Wis.
Godfrey Roller Co., Philadelphia
Graphic Arts Corporation of Ohio, Toledo, Ohio
Graphic Arts Monthly, Chicago
A E. Handschy Co., Chicago
Harris-Intertype Corp., Cleveland
Ideal Roller & Manufacturing Co., Chicago
Interchemical Corp., Printing Ink Div., New York
Kohl & Madden Printing Ink Co., Chicago
Lanston Monotype Co., Philadelphia
Fred'k. H. Levey Co., Inc., New York
Litho Chemical & Supply Co., Inc., Lynbrook, N. Y.
Lithoplate, Inc., El Monte, Cal.
Macbeth Arc Lamp Co., Philadelphia
McKinley Litho Supply Co., Cincinnati
Miehle-Goss-Dexter, Inc., Chicago
Miller Printing Machinery Co., Pittsburgh
Minnesota Mining & Mfg. Co., Ptg. Prod. Div., St. Paul
Modern Lithography, Caldwell, N. J.
Monsen-Chicago, Inc., Chicago
National Cover & Mfg. Co., St. Louis
National Lithographer, New York
Newton Falls Paper Mill, Inc., New York

LNA Conventions

Following is a revised schedule of future conventions of the Lithographers National Association:

1959—*Greenbrier Hotel*, White Sulphur Springs, W. Va., April 13-16.
1960—*Boca Raton Club*, Boca Raton, Fla., April 25-28.
1961—*Arizona Biltmore Hotel*, Phoenix, at a date to be selected.

B. Offen & Co., Chicago
Offset Engravers Associates, Inc., New York
The Harold M. Pitman Co., Secaucus, N. J.
Printing Developments, Inc., New York
Rapid Roller Co., Chicago
The Rathbun & Bird Co., Inc., New York
Reliance Electric & Engineering Co., Cleveland
Roberts & Porter, Inc., New York
Lewis Roberts, Inc., Newark, N. J.
Sinclair & Carroll Co., Inc., New York
Sinclair & Valentine Co., New York
Sleight and Hellmuth, Inc., Chicago
Stevenson Photo Color Separation Co., Cincinnati
Walden, Sons & Mott, Inc., Oradell, N. J.
West Virginia Pulp & Paper Co., New York
Zarkin Machine Co., Inc., Long Island, N. Y.

Coolidge Dies

E. Channing Coolidge, chairman of the board of Croname, Inc., Chicago, died April 15. He had been associated with the firm since 1906.

U. S. Printing Earnings Up

United States Printing & Lithographing Co., Cincinnati, reported net earnings for the 12-week period ended March 23, of \$316,151, equal to 90 cents per share of common stock. For the same period last year earnings were \$302,192, or 86 cents a share.

Directors have declared a dividend of 50 cents a share on common stock payable June 2, and a regular quarterly dividend of 62½ cents a share for preferred stock, payable July 1.

Appoints Two Sales Managers

Henry Searles has been appointed Web Division regional sales manager for the Western states by American Type Founders Co.

The company has also announced the appointment of James Metcalfe to Web Division regional sales manager for the Midwestern states.

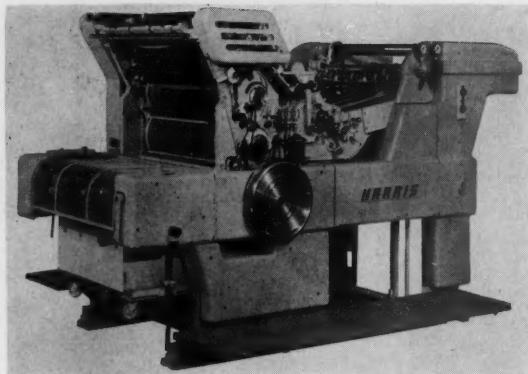
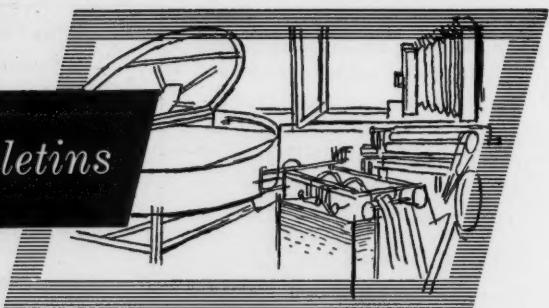
POPAI To Hold Seminar

The Point-of-Purchase Advertising Institute held a seminar at New York's Barbizon Plaza Hotel June 3, to provide new facts and explore current thinking on merchandising and packaging problems. Program chairman was Walter J. Ash, Consolidated Lithograph Corp.

Phoenix bound lithographers and guests boarding special plane at Idlewild International airport April 27 for trip to Lithographers National Association convention. After the meeting many of them returned by way of Las Vegas.



Equipment, Supplies, Bulletins



The new Harris single-color 20 x 26" offset job press.

Announces New Press

Harris-Seybold Co. has announced the addition of a new single color 20 x 26" offset job press, the Model 126, to its line of printing equipment. It is the smallest press to offer Harris feed-roll register.

The press will handle stock sizes from 9 x 12" through 20 x 26", including cover stocks, at speeds up to

8,000 impressions per hour.

Among the features of the Model 126 are a simplified center separation feeder, graduated scales that help position stock and side guides, and an electronic trip which detects early, late, crooked or absent sheets.

Further information is available from the company, 4510 East 71st St., Cleveland 5, Ohio.

Caprock Screens Described

Herbst & Illig, West Germany, manufacturers of Caprock Universal gray contact screens, have prepared a limited number of brochures which describe and illustrate the screens.

The Universal gray contact screen is a new, single-type screen that can be used by all branches of the graphic arts to produce halftones from continuous tone copy. It is used in the same manner as conventional, gray litho or engraving contact screens with white light, arc lights, etc. for the main flash exposures, and developing by eye.

The screen is characterized by giving tiny, hard, shadow and highlight dots, undistorted tone reproduction, fast exposures, and by being neutral in color, the company reports. It differs from conventional screens in

the arrangement of the dots in the screen and in the transparency of the clear areas.

Dexter Offers Bulletin

The Dexter Co. division of Miehle-Goss-Dexter, Inc., Pearl River, N. Y., is offering a 12-page two-color bulletin on the McCain-Christensen combination for inserting, stitching and trimming. Containing photographs and drawings, the bulletin illustrates and describes the integrated equipment used to perform these binding operations.

Included in the bulletin are diagrams of multiple layout arrangements made possible by the unit construction principle and a cost chart comparing the cost of automatic versus hand-feeding for runs of 1,000 to 84,000.

Revised Computer Available

A revised edition of the Kodak graphic arts exposure computer for solving a wider range of exposure problems has been announced by Eastman Kodak Co., Rochester, N. Y.

The computer can be used to determine the exposures for making half-tone negatives with Kodak Contact Screens. The dials have been extended to cover a wide range of exposures for a number of situations that confront the graphic arts specialist.

It contains a dial computer, a reflection density guide, calibration record sheets and is offered with a 12-page illustrated instruction book describing uses of the computer.

Copies are available from Kodak dealers for \$2.50.

New Clean-Up Sheet

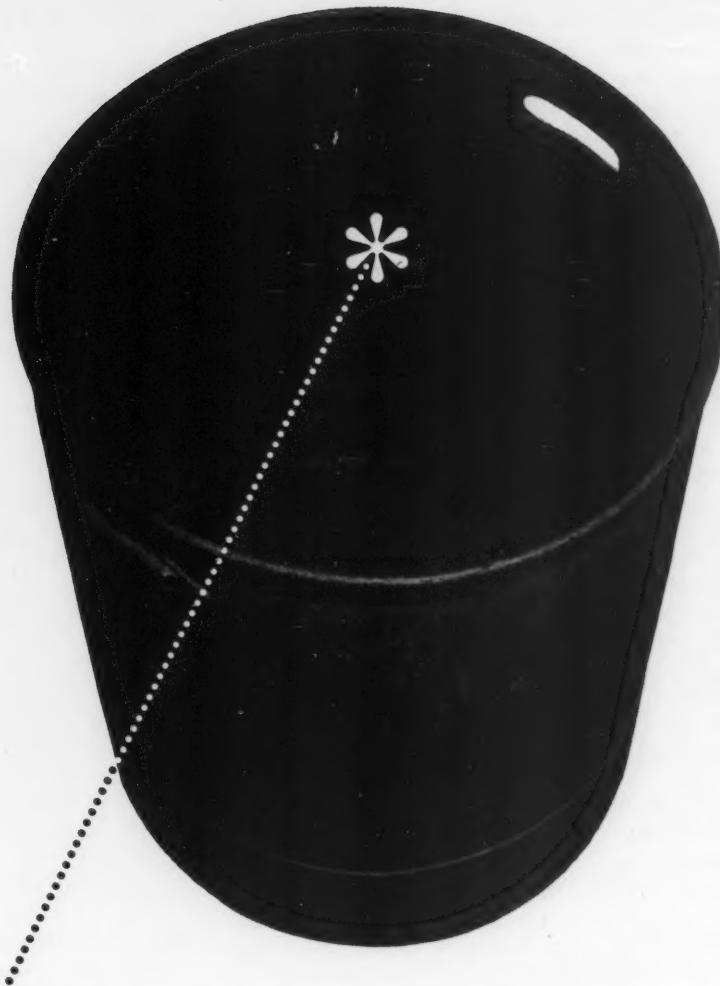
Direct Image Aluminum Plate & Supply Co., 5829 E. Beverly Blvd., Los Angeles, Cal., has announced the development of a new clean-up sheet called "Speedy-Mat."

The company reports that by using "Speedy-Mat," ink rollers can be cleaned in a manner of minutes without taking them off the press. The clean-up sheets are said to have added wet strength and extremely high absorbent capacity.

The two-sided sheets are available for the Multilith 1250 series, ATF-15 and A. B. Dick 350 duplicators.

"320" Camera Folder Offered

A four-page folder illustrating the "320" camera, now is available from Robertson Photo-Mechanix, Inc., 7440 Lawrence Ave., Chicago 31. Entitled Catalog Bulletin No. 322, it describes many of the new features available both as standard equipment and as options on the camera.



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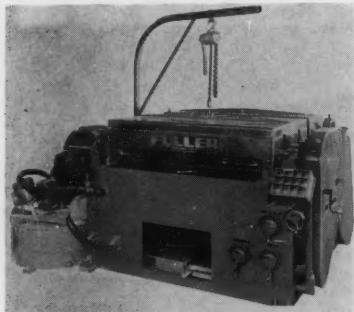
6370 Santa Monica Blvd., Los Angeles 38, Calif.

9109 Sovereign Row, Dallas, Texas

In Canada: Gevaert (Canada) Limited
345 Adelaide St. West, Toronto 2-B, Ontario

New Brush-Graining Machine

The Machine division of The Fuller Brush Co., Hartford, 15, Conn., has announced the development of a new



method for graining and regraining aluminum and zinc lithographic plates.

A specially designed machine imparts to every plate, as it passes through, a uniformly fine grain, removing practically no metal from the surface of the plate in the process, the company reports. The fine grain produced reduces the amount of water required in the press and the uniformity in grain minimizes water control problems.

A pumice and water solution is pumped onto the flat sheets as they are conveyed through the machine by means of rubber covered feed rolls. Two cylindrical brushes pumice-scrub one side of the plate, while a third brushing station scrub-rinses both sides. Full sized new aluminum plates can be grained within two minutes while zinc surface plates may be regrained in three passes in less than five minutes. The company states that new metal does not warp after this brush graining and the plates remain as flat after processing as they were prior to the graining.

Issues Folder On Dryers

The Challenge Machinery Co., Grand Haven, Mich., has issued a four-page folder on its radiant heat proof dryer. The dryers, and cabinets, are available in two sizes, 17 x 22" and 20 x 26".

Eliminates Cylinder Packing

George Mann & Co., England, has introduced a new series of two-color offset presses which eliminate the

time-consuming operation of packing the blanket cylinder for paper adjustments. This operation is performed with a handwheel, and a similar arrangement varies the height of the feed plate for the same purpose.

Presses in the series range from 25 x 38" to 38 x 55". The largest press is said to print 6,000 sheets per hour.

All the presses print both colors while the sheet is on the same impression cylinder.

New Look For Harris Presses

All Harris presses in the 14½ x 20½", 17½ x 22½" and 23 x 30" size are to be finished in a light grey, textured lacquer, the Harris-Seybold Co. has announced.

The company reports that test results indicated that the new textured finish gives increased visibility around the press, particularly underneath it. Pressmen have stated that better visibility aids them in making press adjustments and in maintenance.

Due to the heavier size of paint particles, the new finish is said to have greater chip and wear resistance than previous paints used on presses.

New Verifax Copier

A new model Verifax copier which is said to copy anything from a business card to an outside 10 x 16" inventory form has been announced by the Eastman Kodak Co., Rochester, N. Y.

Named the Verifax Viscount, it is adaptable for use with the Verifax method of producing offset masters for office-type duplicators.

New Register Strips

Sy Pass, Inc., 233 West 52nd St., New York, has introduced a new line of stainless steel register strips for use with the Kodak register punch.

The company states that the pin strips now make it possible to obtain register in any vacuum frame, camera back, transparency copy holder and Pasco color separator.

The pin strips come in two sizes, 1/16" and 3/16" high with either a 6½" or 9" center.

Further information is available from the company.

Duplicating Aids Described

Michael Lith, Inc., 143 West 45th St., New York, is offering on request its catalog #22 which describes many recent advances in duplicating supplies.

The 48-page, two-color booklet includes a section on copy preparation aids, platemaking supplies and chemicals, bindery aids and press accessories.

New Line Of Cutters

Craftsmen Machinery Co., Boston, has introduced a new line of manual and hydraulic paper cutters consisting of three basic models.

The line places design emphasis on operator ease and safety, and is primarily intended for use in printing and duplicating shops.

Adds Counters To Tables

The Jos. Gelb Co., 54 Arlington St., Newark, N. J., has announced that all its line-up and register tables now carry the "Add-A-Matic" counter as standard equipment.

The counters are intercoupled to the vernier shaft of each of the two straight edges and calibrated from 1/64" to 1/1000" to assist in precision straight edge positioning.

New Goerz Distributor

White Photo Sales, Inc., 1770 West Berteau Ave., Chicago, has been appointed the sole distributor of C. P. Goerz American Optical Co. lenses and accessories in 13 mid-western states.

THE WASHINGTON, D. C., Post and Times-Herald has installed its third Intertype Fotosetter photographic typesetting machine.

WHITING-PLOVER Paper Co., Stevens Point, Wis., has issued the new Plover Bond "Letterhead Library," featuring the 12 grand winners in the company's 1957 national letterhead competition.

MONSEN TYPOGRAPHERS, Inc., has acquired an additional 7,500 sq. ft. of floor space to be used as office and storage areas.

R. & E. COUNCIL

(Continued from Page 88)

blanket pressure, close plate tolerances and critical inking of the printing area. He does not think the process "really practical," he added.

The conference pondered the question, familiar in all lithographic conventions, of "the best way to educate the advertising agencies, who don't seem to know what happens when their copy gets to the shop."

Ink Standards

Another question concerned the advisability of standardizing printing inks. Dr. Walker, who handled this question, explained that, due to varying conditions, involving presses, stocks and other variable factors in individual plants, it would be difficult to set up standards for inks that would fit all conditions.

An LTF research staff man, Frank Preucil, also spoke very briefly on a question regarding the application of the densitometer to the photo-mechanical process. There's a lot of mystery as to what the densitometer can do, said Mr. Preucil. He described it as "simply a light meter for measuring variation in the amount of light and making adjustments in the process in hand."

At the opening session of the Chicago conference Dr. Samuel Caldwell, of Massachusetts Institute of Technology, discussed in general terms the pertinent subject of what research might accomplish for printers and lithographers but concealed his point under the intriguing title, "An Open Mind Does Not Mean a Hole in the Head."

Speakers at the banquet included T. B. Hawkes, of T. W. & C. B. Sheridan Co., and Howard Seel, of Harris-Intertype Co., who reported on their trip to the DRUPA exposition. Luncheon speakers were William Gove, of EMC Recording Corp. and George Philip, of Armour Research Foundation. Other features of the Chicago meeting included a field trip to Ludlow Typographic Co.'s plant for demonstrations of their "Brightype" process for converting letterpress forms to

offset use. The Inland Press plant and Miehle Printing Press & Mfg. Co. factory also were visited by other groups.

Attendance at the Chicago conference was put at over 200 by Mr. Rosell. This, he thought, "was good considering DRUPA."

At a brief business session the membership committee chairman, George H. Cornelius, Jr. reported that present membership of 270 is a 10 percent increase over last year's 247 members.

George H. Cornelius, Jr. of Cornelius Printing Co., Indianapolis, was elected president of R. & E. Council to succeed Felton Colwell, of The Colwell Press, Minneapolis. Other officers are Alan S. Holliday, Craftsmen, Inc., Kutztown, Pa., 1st vice president; C. L. Jewett, Minnesota Mining & Mfg. Co., St. Paul, Minn., 2nd vice president; W. R. Spiller, Harris-Intertype Corp., Cleveland, O., secretary; and Paul Lyle, Western Printing & Lithographing Co., Racine, treasurer.★



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WARREN F. WITHERELL has been elected treasurer of the Tileston & Hollingsworth Co., Hyde Park and Boston, Mass.

EDITORIALS

(Continued from Page 39)

the process really assumed its full share of work at the G.P.O., increasing efficiency and helping make possible Mr. Blattenberger's well-known return of \$13 million to the Treasury Department.

Combination shops know that letterpress and offset under the same roof can give the printer a big advantage in versatility and market potential over the strictly letterpress or offset shop. But they know too—and letterpress printers thinking about adding offset should keep this in mind—that throwing the processes together with overlapping supervision just won't work. Offset and letterpress can be teamed quite successfully, but *only* if they are considered as completely separate operations.★

MASKING

(Continued from Page 64)

and go as high as \$600.

2. An LTF SENSITIVITY GUIDE (manufactured by Stouffer Graphic Arts, and available through your local supply house), a COLOR PATCH AND GRAY SCALE on paper. The sensitivity guide is a film gray scale numbered from 1 to 21 and ranging in density from .05 to 3.0. It is used as a guide to measure density readings on both masks and separations. The paper gray scale and color patch are opaque scales which are used on reflection copy.

3. A CONTACT LIGHT SOURCE, such as the KM Tri-Level Light. This is used for making masks and separations on transparency copy and for masking on reflection copy. It comes completely equipped with a transformer and filter holder which takes three-inch square filters.

4. Miscellaneous items such as glass plates, films, developers, etc., which can be purchased as needed for the individual job.

Along about this time I guess that you are so filled with theory, rules, do's and don'ts that you have forgotten the main purpose of this series, that of color separation. Enough said. Let's go on to making a set of separations.

If you made the color chart and a transparency from it as described in Article 1, you probably have a density range of approximately 2.0 with a low of .35 and a high of about 2.35. If you do not have the chart, take any transparency with readings as close as possible to these. We know that in our separations we want to get a density range of 1.3. Figuring this out for gamma in Figure 6, we find that we must have a gamma of .645 or .65. Now to find the exposure and developing time.

Before we get into this, let us look at the LTF Guide, previously mentioned. On the particular one used in tests for these articles the density readings of the steps are shown in Figure 8.

Fig. 8
LTF Sensitivity Guide:
Density Readings

STEP NO.	STEP NO.
1. ....	.06
2. ....	.26
3. ....	.42
4. ....	.56
5. ....	.70
6. ....	.85
7.	1.00
8.	1.11
9.	1.27
10.	1.46
21.	2.95
11.	1.59
12.	1.75
13.	1.88
14.	2.00
15.	2.16
16.	2.31
17.	2.45
18.	2.58
19.	2.71
20.	2.84

The high and low densities of our transparency correspond to step number 3 (approximately) for the low density of .35, and to step number 16 for our high density of 2.35 (on the transparency). We will make our exposure tests on this guide using steps 3 and 16, since they correspond to the density of our transparency.

The gamma chart for Trichromatic Plates listed in Figure 7 shows the gamma etc., for exposure to carbon arc. However we are using incandescent light for this particular set of separations, so we will have to make our own gamma chart, since there is a radical difference in the

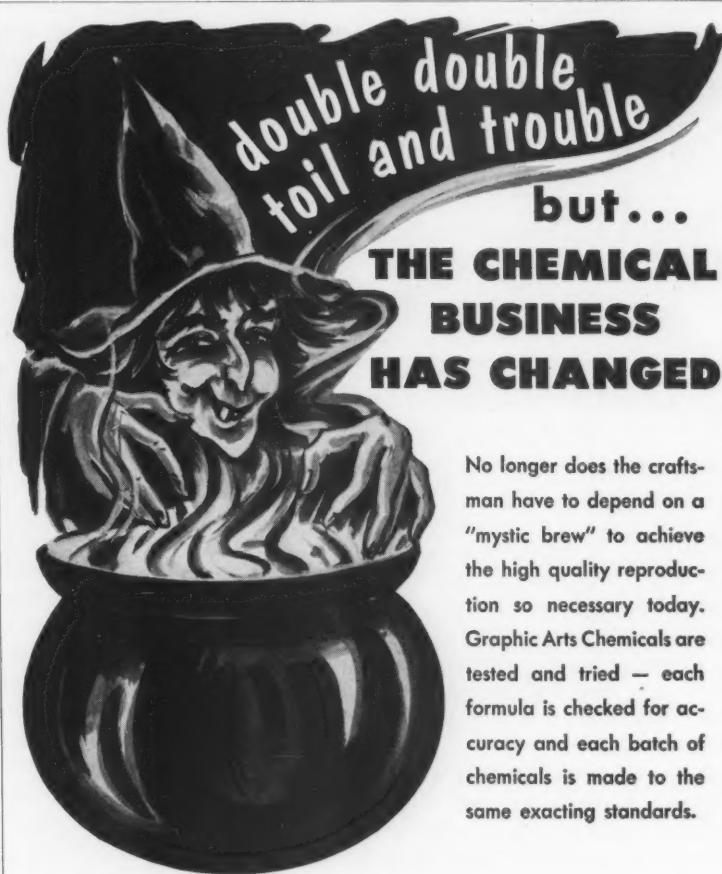
color quality of arcs as compared to incandescent. The tests listed were made with a KM Tri-Level Light source exposed at 36 inches from light to contact frame. (If you have a different light source, check Figure 10 for the General Electric Exposure Meter reading and adjust your light source to get a similar reading).

Start by exposing the LTF Guide, emulsion to emulsion to the Trichromatic Plate for 10 seconds and 20 seconds (both exposures on the same plate). Use an F (No. 29 filter), on

number two tap of the KM Light, and develop for four minutes in DK 50 (1:1) at 68 degrees with constant agitation. The red filter will give us the cyan printer. Make the other exposures as follows:

10, 20 seconds Dev. DK 50 (1:3)	4 minutes
5, 10 seconds Dev. DK 50 (1:2)	4 minutes
5, 10 seconds Dev. DK 50 (1:1)	4 minutes

Your results should be shown in



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the table below.

Let's plot this information on a graph sheet as shown in Figure 9. This will serve as a useful guide in further work. What we have done here is to make our own time and gamma chart, which we can later use for figuring out exposures and developing times.

If you want to make this same test on reflection copy, you can use the gamma chart shown in Figure 7 for the Trichromatic Plate, making exposures of approximately 8 and 16 seconds, shooting at same size, with two 35 amp arcs, at f 32. Check to see that you get a minimum density of .2 in step number 11 (the blackest)

on the paper gray scale. If the density is below this, increase exposure. If too high, reduce the exposure. The gamma figures given for the Trichromatic Plate are approximate gamma, and of course will have to be adjusted to your own individual shop conditions.

If you prefer to use film instead of glass, you can get separation films from all the leading manufacturers, including Ansco, DuPont and Kodak. Carry out the same procedure, and adjust the developing time and exposure time according to manufacturer's instructions. This may seem difficult to do, but follow the same procedure that we have already listed

for making the gamma chart and adjust the initial exposures to approximate the results we have in Figure 9.

From our tests we see the closest we came to a .65 gamma was in the last exposure, developing for four minutes with DK 50 (1:1). This gamma was .67, too high for what we want. By using a rule of thumb measure, let us reduce the developing to 3 minutes and 40 seconds, and make an exposure to our transparency (with the gray scale attached). The result of this separation is shown in Figure 10.

I want to bring out one more point. Remember that developing time controls gamma, and gamma is contrast. Consequently, if we want a lower contrast (or gamma) we reduce developing. Developing time controls contrast, and contrast is gamma.

In the next article, we will finish the other separations, and go into masking.★

TEST NO.	DENSITY		DENSITY RANGE	EXPOSURE TIME
	Step 1	Step 21		
1. ....	.89	.16	.73	.25
	.93	.20	.73	.25
2.	1.24	.14	1.10	.38
	1.28	.29	.99	.34
3.	1.22	.12	1.10	.38
	1.52	.24	1.28	.44
4.	2.20	.26	1.94	.67
	2.26	.46	1.80	.62
				10 Sec.
				20 Sec.
				10 Sec.
				20 Sec.
				5 Sec.
				10 Sec.
				5 Sec.
				10 Sec.

HELPING THE STRIPPER

(Continued from Page 42)

Other models have vertical straight edges in addition to the horizontal bar. (Available from Craftsman Line-up Table Corp., Waltham, Mass.; Jos. Gelb Co., Newark, N. J.; and Hulen Line-up Table, 417 E. 10th St., Kansas City.)

These combination units are very efficient in setting up and ruling forms into blank areas. Other ruling tools can also be employed for special rulings or lining up. Steel triangles are usually employed to work in vertical lines.

A new advance in making the stripper's job more efficient is a gridded top glass. This glass will be made available for tables already in shops as well as for new improved units that will soon be on the market. It is my opinion that the ability to check two ways with a precision, built-in grid will be a major advance in the art of stripping, planning, and setting up easy or difficult offset jobs. It is excellent for squaring everything up and preventing errors. (Available from Jos. Gelb Co.)

Stool Is Helpful Aid

Considering the color stripper or artist is a graphic arts leader, we see no disgrace in having a comfortable stool or chair for the black and white stripper's use. The old style printer's stone man never had an opportunity to sit down. He was always walking around his work. He took personal pride that his was a standing

up job. The main reason was perhaps that the shops never had enough aisle space to permit this luxury, so everyone had to squeeze by each other.

Hands will perform much more easily and with more precision if the operator's body is comfortably relaxed. The stripper is constantly making very delicate and critical measurements and adjustments to his paper flats.

A soft rubber floor mat will relieve the pressure on tired feet. When one's feet get jumpy, the entire body of the worker will get jittery. It is a matter of sympathetic fatigue. Old timers change their shoes when they come on the job—not just to save their shoes, but to save their feet. These thoughtful workers know that they can accomplish more working in softer old shoes. When your feet get tired, you feel tired all over.

We have pointed out that the stripper operates like the catcher on a big league baseball team. He must know the signals from the bench or front office. He is responsible for doing the last or most important job first. He must be able to estimate accurately the required shop time to get a job up to the press. He has to call his own signals—explain what is required on special jobs. He may have to go to the "outfield" and discuss how the bindery wants to cut, fold, and ship a big job.

He will have to argue with the "umpire" about such strikes and balls as poorly written shop orders, defective copy, impossible time schedules, etc. Sure, the coach (the foreman) may call for a fast play, but if the catcher says it can't be done, no one ever wants to carry the argument further. The stripper is truly the catcher of the offset production team. He's the hardest worker, too.★

FAIR PROFIT

(Continued from Page 70)

job, which was quite similar to one he had quoted on several months previously, similar in that the quantity was identical and the specifications about the same. He had lost out on the first quotation, and in his desire to obtain the business, he went in with a price on the second proposition which was about 40 percent lower than the first. When asked for an explanation of this difference by the buyer, his only comment was that he had hired a new estimator. Needless to say, he didn't get the business.

Poor Sales Practices

Several months ago, while on a trip, a salesman applied to me for a job with the Forbes Company. In our discussion, he wanted to know if our company would go along with the same pricing policy that his present employer used. That was, on any new accounts, to quote prices *below* our costs for the first year so as to be sure a certain volume of business was secured. Once the business was obtained, the prices would be raised during the second year to equal our costs, and the third year, raised again up to the proper selling price. The third and fourth years, prices could be obtained to more than compensate for the first two years of cut prices. This man had been with his employer several years; and if I told you the employer's name, I am sure you would agree that it is known as a reputable outfit. The man certainly was not hired, for to condone such a policy is the same as calling our customers and prospective customers just plain stupid.

There is another interesting case, just recently called to my attention. It seems a printer, who had been a supplier to a large food company for 15 or 20 years, received a call from the purchasing agent of the food company, stating that they—the food company—had received a price from a leading competitor of the lithograph firm that was about 10 percent lower than what they were paying. The in-

ference on the part of the purchasing agent was that the lithographer had been overcharging them. However, after much conversation and quite some investigation, it was learned that the lithographer putting in the lower price had not even estimated the job. He had been able to find out what the food company was paying and deliberately cut the price 10 percent, hoping that if he got the business, he would somehow be able to make out reasonably well on the job.

Then, of course, there is always the

old blind of deliberately quoting a cut price, with the idea of going back at a later date, when the job is already in work, and appealing to the customer for additional monies, claiming a mistake had been made in the estimate or that the job was more difficult than originally anticipated.

Price cutting is a terrible disease, one that is hard to cure and one that, if not cured, leads to a sure but lingering death. How is it cured? It is not too difficult if faced squarely. To do it, one must, above all, know

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his costs and, accordingly, price his product accurately.

Some lithographers may have some doubts, and rightly so. I have heard condemnation of not only competition, but even certain customers, that they are responsible. Maybe they are, but let's first look at graphic arts management and see what can be done about it.

Too Many Presses

It is true that the industry has the reputation of being, at the moment, over-machined or possessing too much press capacity. There may be something to this, but to either confirm or deny this rumor, much analysis is necessary and, personally, I doubt that the situation is as severe as rumor would have it.

However, some individuals, unfortunately, trade on this and pit, with only half-truths, one graphic arts salesman against another in their efforts to drive prices down. There are instances where, through this practice, prices have been driven down to even less than the true manufacturing cost. Also, there are those who know little or nothing about printing, yet they will tell how the product should be priced.

These procedures, which really demonstrate crystal-ball management, are as familiar to you as to me and are a sad commentary on management and no one else. The graphic arts industry is too many times treated with disrespect. It has become the victim of the inferiority complex which might better be termed "break-evenism".

I could go on relating other weaknesses and abuses; but, for fear of boring you with what is already known, I will merely add that it is extremely important that the industry recognize all such weaknesses and take immediate steps to remedy the situation. If there ever was a time for action it is now. The future of our country is great and within a very short time it will enter into another phase of great prosperity, which will surely be as great and probably greater than that experienced over the past 10 years. Murray

Shields, consultant, recently listed what he termed, "the 16 revolutions of present-day America." Here are 13 of them:

1. Expanding research
2. Population explosion
3. Rush to suburbs
4. Spreading of incomes
5. Efficient farms
6. New-style selling (Merchandising and Distribution)
7. Plentiful power
8. Abundance of metals
9. Transportation speed-up

10. Tomorrow's weapons
11. Better education
12. Management changes
13. Government planning

In these revolutions, Mr. Shields foresees an enormous potential for growth, provided only that people and management recognize what is going on and do not unwisely throw away their opportunity by bad judgment and excesses of speculation. Like the future of our country, the future of the lithographic industry is also bright and fully assured, but its

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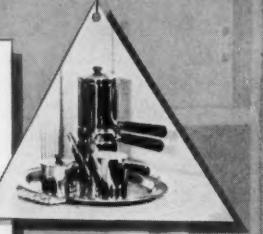
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members must plan for profits if their future is to become a reality.

We should ask ourselves why we allowed our profits to decline in the past several years while our economy was forging ahead to new heights. We must make plans now so as to prevent any such repetition in our next era of economic prosperity. Individual success will depend entirely on the astuteness and flexibility of management.

Management must be prepared to set up and follow schedules covering equipment and machinery replacements and obsolescence; be ready for the ever-changing and increasing demands of our economy to meet the ever-growing element of competition; to set up and blueprint the proper personnel programs so that its shops and departments will be efficient and adequately staffed and ready for eventual retirements and changes in general. It must also provide for the proper selection and training of salesmen and, lastly, be prepared to adopt the new industry techniques that are sure to come, plus many other plans and programs involving efficiency and productivity.

These are some of the things that management must do if it wishes to be prepared for the future.

After all, *it is management* which is responsible for replacing inefficient high-cost products with efficient low-cost ones.

It is management which is responsible for any unwarranted overcapacity in its operating departments.

It is management which stands for wasteful selling methods.

It is management which fails to provide the right kind of incentives for workers, salesmen, supervisors, and even executives.

It is management which puts up with inefficiency in machines and processes in manufacturing products.

It is management which is responsible for failure to know costs.

It is management which is charged with the responsibility to budget its income and outgo.

We must devote much more attention to the matter of profit—as profit—particularly if we view it as the

“life blood”, the “motive power” of business, without which “business death” first becomes a possibility, a probability, and finally an actuality. There should be a *profit par* in every business to play against.

Objectives of Management

In conclusion, let's set up some immediate objectives for graphic arts management. These are:

1. Be proud of the industry.
2. Develop more intestinal fortitude.

3. Establish research and development programs.
4. Cooperate more fully with suppliers, not only from the standpoint of the research and development programs, but also endeavor to get them to improve the health of the lithographic industry by what might be termed, perhaps, “a little better selectivity” of their customers; and, in the case of the machinery manufacturers, a little better handling of secondhand

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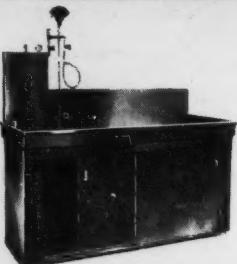
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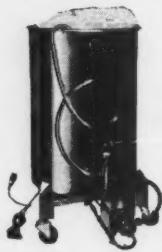


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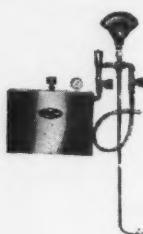


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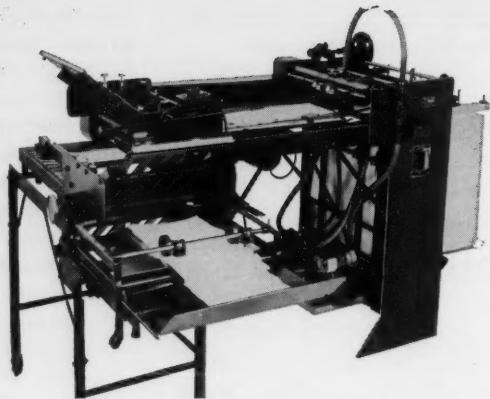
The universal all film dryer has been designed to meet the requirements of the industrial, commercial and professional laboratories. The unit operates rapidly, thoroughly and safely. Your assurance of peak efficiency. Size 24" x 16" height 82".

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MODERN LITHOGRAPHY, June, 1958

OSCAR **FISHER**
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equipment. This would be merely an attempt to keep the laws of supply and demand more nearly in line with one another.

5. Promote, as an industry, better understanding and cooperation among its individual members by setting up, perhaps, a *code of ethics* that would be realistic.
6. Through honest and efficient work, deliver quality and service.
7. Study its cost.
8. Upgrade its selling effort.
9. Above all, plan for profits, profit-making techniques, and abandon crystal-ball management.★

DEVELOPMENTS

(Continued from Page 54)

cut labels. Our post office, recognizing this principle, is producing more and more postage stamps in rolls and offering a greater variety in their size.

The supermarket, with its acceleration of impulse buying, has brought four-color process to many packages previously produced in monochrome. To resist the diet shattering effect, for example, of the desserts in full color, which embellish a pound package of the American Sugar Refining Company's confectioners sugar, would require will power of a truly herculean character.

With the increase of color television and the promotional printing tie in with television advertising, process printing may be expected to be stepped up still further.

Imagination must be exercised not only in recognizing trends, but in dreaming up the methods and equipment to keep step with them.

The trend to web-fed presswork will stimulate size standardization in many printed products, and such size standardization will, in turn, encourage the trend to web production. This is particularly true in the case of die cutting where a variation in the general size and shape of the end product which discourages the employment of rotary cutting, may,

through the use of reciprocating dies and the consequent necessity for web stoppage, reduce, by 50 per cent, the productive potential of a half million dollar press.

If size standardization would appear to cramp the style of the product designer, he will be well compensated by the growing variety of materials available. Better and cheaper foils, high gloss finishes and laminations, and new developments in photography should make his job more interesting and satisfying.

Unless we have been completely deceived, unless the sudden and revolutionary technical change we have recently witnessed is a mirage, the graduates of printing schools are about to embark upon an adventure in progress that should be the envy of everyone who at one time or another has pitted his intelligence and ingenuity against the problem of our industry.★

DESIGN SHOW

(Continued from Page 43)

Ruggles Co. closely followed with seven pieces, including brochures, stationery, Christmas cards and announcements.

Other litho firms and the number of pieces they placed in the winning column were Hillison & Etten Co., 4; Magill-Wcinsheimer Co., 3; D. F. Keller Co., 2; Photopress, 2; and one each for the following: R. R. Donnelley & Sons Co., Rand McNally & Co., Columbian Lithographing Co., Advance Lithographing Co., Rider & Dickinson, Container Corp. of America. Case-Hoyt Corp., Syracuse, N. Y., produced one poster hung in the show and Milprint, Inc., Milwaukee, was represented in the packaging class by several pieces produced by offset and other processes.

Judges of the contest were John Breunig, art director, Foote, Cone & Belding, Chicago; Louis Danziger, designer, La Puente, Calif., and George Krikurian, promotion director, *Look* magazine, New York. Chairman of the STA exhibition committee was Hayward Blake, art director, Ekco-Alcoa Containers.★



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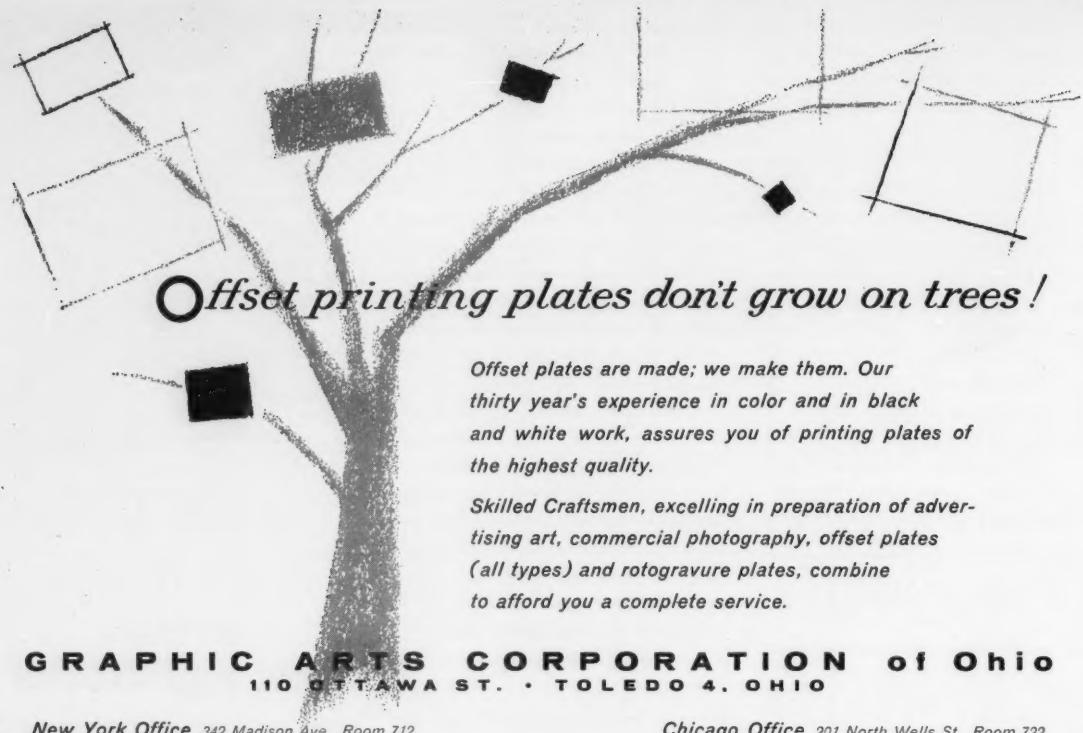
- *Pay for themselves in a few months*

These and similar comments are sure to reach you when you ask. Ortleb Agitators *cost very little* and are a one time investment. Write for our brochure; at the same time mention name and model of your press or presses, so that we can quote you prices. No obligation. Obey that impulse . . . write today!



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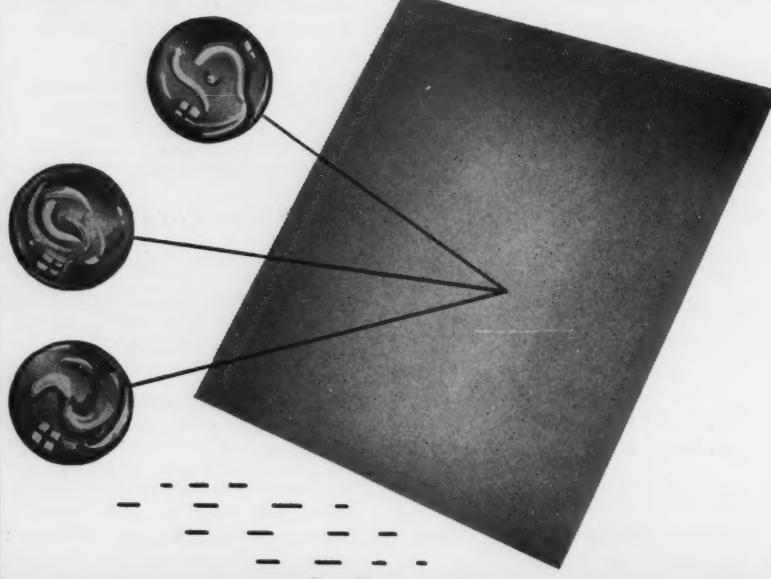
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is accepted by plate-makers throughout the country for the most exacting type of litho plate graining. AGSCO Silica is used to produce the highest quality finish by eliminating all synthetic abrasive particles imbedded in the metal.

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Chicago 13, Illinois Paterson 4, New Jersey

Save Money on a
Group Subscription
See Page 85

DORIC PRESS

(Continued from Page 67)

of the company's work is referred to them by satisfied customers such as Schering, Mr. Leone reports.

Perhaps the key to the success of Doric Press can best be summed up in Mr. Hoile's comment, "we like printing." ML is convinced that they do.★

PHOTO CLINIC

(Continued from Page 83)

pared by using a special aluminum transfer offset plate for receiving the positive image. An image is created on the aluminum plate in the manner just described. After removing the paper negative the aluminum is treated with a conditioner solution and then with a lacquer. Following this operation the plate is ready to run on the press.

Total platemaking time is about three minutes. The combined printing (exposing) and processing unit, 10 x 15" aluminum transfer plates, negative paper and processing chemicals are at present available from the A. B. Dick Co. Reports indicate that Gevaert Co. of America soon will introduce a similar plate.

2. Verifax Method

The other transfer method is Verifax, which is based on the physical transfer of an image from a matrix. It has long been known that when a photographic emulsion composed of silver salts and soft gelatin is developed in a tanning developer, a very thin layer of the unexposed and unhardened gelatin can be transferred to ordinary paper. Verifax matrix material is a soft gelatin emulsion on a paper base. In addition to the silver salts, the emulsion contains also a tanning developing agent and color forming components.

The matrix is exposed by reflex

and then immersed in a mild alkali solution. Development produces a hardening of the exposed areas. The developer also reacts with the color-forming components to form a dye in both the exposed and unexposed areas. The developed matrix and a receiving sheet are then squeegeed together.

Upon separation, a thin layer of gelatin containing dye will be found to have transferred to the receiving sheet, forming a positive image. The matrix can be re-immersed in the developer and the transfer repeated to obtain at least two additional prints.

Kodak has designed several models of a combination printer and processing unit. A special offset transfer plate (Polychrome V-Kote) is substituted for the receiving sheet when offset duplicator plates are desired. The operations remain identical except for the use of a special pressure device for bringing the matrix and transfer plate into contact. Following conditioning with a special solution the plate is ready for the press.

For Short Runs

Both of the systems described are unique and distinct platemaking methods, but are intended primarily for short runs. Plates for long runs can be made by combining reflex copying with conventional surface or deep-etch platemaking processes or with presensitized plates.

Using the simplest reflex method, a paper negative is made from the original. This negative is used to expose any of the available negative-working duplicator plates. By means of auto-positive materials, or the diffusion-transfer-reversal photocopy materials, reflex positives can be made to use with positive-working plates of any type.★

TECH. BRIEFS

(Continued from Page 89)

gelatin proportionately to their concentration, thus hardening the halftone dots to a greater degree than the areas in between, and leaving a relief printing plate.

LATEST DEVELOPMENTS IN THE GRAPHIC ARTS PRESENTED BY Robert E. Rossell,
The Electrotypes and Stereotypes

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39" 3YR Seybold Power Cutter \$3500
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1-30 x 30 Bracket Jogger \$ 250
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22 x 29 Baum w/64 pg. attach., w/suction feed. Mod. 433 \$2150
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New model 219 Vandercook Proof Press. Power inker, color frisket
reg. plate base—3 yrs. old \$2750
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Magazine 43, No. 12, December 1957, pp. 12, 13, 14, 16, 18, 19, 20, 21, 22, 24, 25, 26, 27 (13 pages). A summary of many recent developments and innovations in electronics and photography for the graphic arts. Instruments, materials and processes discussed include: p. 12 Electronic Scanners; p. 18 Phototypesetters; p. 21 Nylon letterpress plates; p. 22 Photosensitive plastic letterpress plates; p. 22 Autoscreen Film; p. 22 High speed offset web press; p. 21 Collobloc; p. 22 Photographic processor; p. 24 Flexography; p. 24 Screen Process printing; p. 24 Xerography; p. 25 Electrofax (photographic printing); p. 27 Brightype.★

LETTERS

(Continued from Page 46)

39th St., New York 16, N. Y. and request such a book. The LTF publishes a variety of books on the subject and just about a year ago issued an excellent summary of lithography, which would probably be ideal for your purposes.—Editor.

Web-Offset Information

Dear Sir:

I would appreciate receiving any information you might be able to give me on manufacturers of web-offset presses in sizes smaller than 24 x 36".

William Beddar
Japs-Olson Co.,
Minneapolis

We are sending "Offset Press Specifications," which will give you the information you need.—Editor.

DEPRECIATION

(Continued from Page 40)

the provisions we have in the tax law now, under which a taxpayer who sells his home at a profit and reinvests the money in another home is not taxed on the apparent capital gain he made when he sold his old home. The fact, of course, is that the home owner doesn't have a more valuable home now than he had when he built it. It would probably be less valuable but it is worth a greater number of today's dollars than the older and more valuable dollars which represented the cost when he built it.

Congress has recognized this for you and me as *individuals*. It has also recognized that when a building burns down and your insurance is greater than the original cost of the building, the apparent profit on the insurance money is not taxable, pro-

vided it is reinvested in a similar building.

Reinvestment Method

The reinvestment method of depreciation is very much like these provisions. When property is scrapped, sold or disposed of in any way, its present value is calculated, and the difference between that and its original cost is allowed as depreciation, provided the money is spent for other depreciable property. A two-year carry-forward is provided, and, what is quite attractive to our own industry, the proposed legislation would permit deductions each year against the income of a business of the cost of new capital investments in excess of the cost of assets sold or dismantled in an amount up to \$50,000.

If an announcement could be made now that this method of depreciation would be allowed for the year 1958, I believe that a great many of the members of our industry would expand their programs for retiring old plant and reinvesting in new. This would of course, stimulate the builders of the presses and other equipment. It would provide jobs immediately.

It has been the experience in our industry that improved equipment and facilities have increased jobs rather than decreased them, even though the specific process may have required less labor. There is no reason to believe that this condition will not continue. While we would get bigger depreciation allowances under this plan, I think we would at the same time increase our volume and income enough to more than make up for the decrease in taxable income.

What we need right now is more jobs and an increasing volume of business. The reinvestment plan seems to me to be one of the best ways to bring this about. The Cost and Financial Management committee of the Lithographers National Association has endorsed this proposal as one which would be a tremendous step forward for the industry because it would correct the inequity which forces us to pay federal income tax on dollars which should be set aside for the replacement of our assets.★



IDEA NO. 133

Anyone for Frisbee?

Newest game fad is "Frisbee"—sort of a cross between a "Flying Saucer" and old-fashioned boomerang. Just toss the vinyl plastic disc in the air, and it comes spinning back. Sounds like fun—and it sounded like an apropos convention give-away for the Jet Division of THOMPSON PRODUCTS, INC., of Cleveland! A. H. SCHWEITZER, Sales Mgr., commissioned his agency, MELDRUM & FEWSMITH, to do a label describing its tie-in with the "quiet, smooth-spinning, vibration-free action" of Thompson's jet components. That's it above—printed on KLEEN-STIK, of course—by FRED HENRY of COPE, INC., Cleveland. Magical, moistureless KLEEN-STIK goes on easy, sticks tight on the soft plastic, comes off clean—perfect for the purpose!

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IDEA NO. 134

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(Continued from Page 45)

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CALENDARS: A.M. and H.M.—R. M. Rigby Printing Co., Inc.; **PRINTERS' OWN ADVERTISING**: A.M.—Birmingham Publishing Co., H.M.—Western Lithograph Co.; **ANNUAL REPORTS**: A.M. and H.M.—Western Lithograph.; **BROADSIDES**: A.M.—Paragon Press, H.M.—Courier-Journal Lithographing Co.; **PROGRAMS**: A.M.—Western Lithograph Co., H.M.—S. C. Toof & Co.; **HIGH SCHOOL ANNUALS**: A.M. and H.M.—Benson Printing Co., **COLLEGE ANNUALS**: A.M. and H.M.—Benson Printing Co.; **BOOKS (Cloth Bound)**: A.M. and H.M.—Kingsport Press, H.M.—Parthenon Press; **HOUSE ORGANS AND PUBLICATION**: A.M.—Western Lithograph Co., H.M.—Fetter Printing Co., Parthenon Press; **MENUS**: A.M.—Journal Printing Co., Inc., H.M.—Western Lithograph Co.; **POSTCARDS**: A.M.—Mercury Lithographing Co., H.M.—Western Lithograph Co.; **GREETING CARDS**: A.M.—Litho-Krome Co., H.M.—Western Lithograph Co.;

GRAND AWARD: Mercury Lithograph Co.★

SGAA

(Continued from Page 45)

best with which cyan, then developed a series of three such pairs. Frank Preucil, of LTF, tested them and found he could correct with only one mask when using these inks. Not a new system, merely a simplification, based on changing the shades of the inks slightly. Won't eliminate all hand work, and usually a black printer is required. Coordination between camera, press, etc. is needed to get best results with these balanced inks, now manufactured by Interchemical Corp.

INTERTYPE FOTOSETTER, a film shown by Sheridan S. Skogen, of Intertype Corp. Film depicted development of photocomposition, its advantages over hot metal, method of operation of the machine, and some new developments, including wider measure (now 51 picas) point sizes from 3 to 54, and new sets of Foto Fonts. Fotosetter now may be had on a lease-purchase option or by outright purchase.

ROLE OF SMALL BUSINESS, Oscar Whitehouse, LNA. Tax structure in U. S. poses a threat to small and large companies. Concepts of depreciation are inadequate, and do not allow for steep increase in cost of equipment to replace obsolescent machinery. Depreciation systems should take into consideration the replacement costs of equipment; particularly important in an industry composed largely of small businesses. Country in recent years has shown a lack of appreciation for the role small business plays as the "backbone of the nation." Business-

men should participate in trade groups, meet with congressmen, etc. to reassert their position of leadership.

QUALITY CONTROL MEANS COLOR CONTROL, Richard H. Scott, Sinclair & Valentine Co. Key to printing is quality control. This assures dependable colors which will combine to produce faithful reproductions.

KNOW YOUR COSTS, Frank R. Turner, NAPL. Recent survey by Mr. Turner showed only 12 of 70 litho firms know their true costs. There is almost complete lack of basic information. Four major cost trouble spots in our industry: 1. Need to set up reserve for spoilage. 2. Need to keep budgeted hourly costs up-to-date. 3. Need to apply production data realistically to hourly costs. 4. Need to compensate salesman sensibly and to mark up the estimate sufficiently.

BUSINESS IS PEOPLE, Otis E. Wells, president, NAPL. All business consists of equipment and people. The difference is in the *people*. Much time is spent planning equipment purchase, but "too often we hire the first person we see, with little regard for his aptitudes." Mr. Wells described use of several types of personnel tests in his plant (Western Lithograph Co.) Results have been excellent. "When you get understanding, people will work with you as a team and share with you the objectives of management."

Early arrivals at the convention enjoyed a day at the races. Trips for the ladies also were on the social program, which was climaxed by the annual banquet. Elected "Rebel Ambassadors" were Mr. Doesburg and Mr. Hutchinson.★

Some of the award winning SGAA exhibits





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TALE ENDS

THE LNA convention in Phoenix was quite a relaxed affair, aside from the rather busy business sessions. Cabanas around the pool were favored places for entertaining and for outdoor lunch in that hot, dry atmosphere. The golf course was a popular spot, as always, but the cement tennis courts proved a little too hot, even considering Phoenix has "a different kind of heat."

The air seemed to bring out the adventuresome spirit of the ATF contingent, who decided on a midnight swim in the pool. Bill Fisher, Dick Manley and Doug Murray made quite an imposing trio of water buffalo after their excursion. Ernie Higgins, of the Canadian Lithographers Association, also boasted of a moonlight dip.

Harry Grandt, head of Roberts and Porter, has always been noted as a good sport. At Phoenix, he shelled out more than we think his wife should know for what proved to be one of the most entertaining features at the convention — a pugnacious toy bull



Which bull is the phony?

dog with a most realistic wobbling head and a very convincing bark. (At left in photo)

After entertaining in the dining room with the hilarious mut, Harry magnanimously entrusted it to a member of the ML staff, who saw to it that it scared the wits out of three airline stewardesses, two cabbies, in-

numerable barkeeps, and his two young sons.

Officially, Roberts and Porter, wasn't even at the convention. Harry and his assistants, John Skahill and Ken Mills, all were erroneously listed as being from Litho Chemical.

Carl Sorenson, of Lanston Monotype, who helped pull the bull dog hoax on the

unwary stewardesses, reported that his company contributed Monotype equipment for a typesetting exhibit in Grand Central Station, New York, May 5 to June 26. The exhibit is part of large display on non-ferrous metals sponsored by American Smelting Co.

New LNA vice president Bill Zabel did his best at one of the receptions to prove that Philadelphians aren't as stodgy as some people think by wearing a flaming red dinner jacket. Your correspondent, who is an expatriate Philadelphian himself, would guess that everyone still thinks Philadelphians are a stuffy lot, but at least they realize Bill has lots of verve.

LNA next year will meet at the Greenbrier, April 13-16.

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